

Are Korean Companies Ready for the New Workplace Safety Law?

Assessing Potential Health & Safety Risks Among Korean Companies Following the Introduction of Korea's New Workplace Safety Law

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Executive Summary

In January 2021, South Korean congress passed a bill that places heavier penalties to the companies with 50 or more employees, which will come into place as early as from January 27, 2022. This could pose regulatory challenges to the labor-intensive industries, especially those relying on contractors/sub-contractors. However, **we found Korean companies¹ were not well prepared to mitigate these risks.** To assess how much Korean companies would be prepared to the new workplace safety regulation, we reviewed a record of controversies related to health & safety (H&S) issues and assessed four major metrics in our H&S Key Issue: Executive oversight, H&S performance link to executive compensation, H&S policy, and target to improve H&S performance.

Key Takeaways:

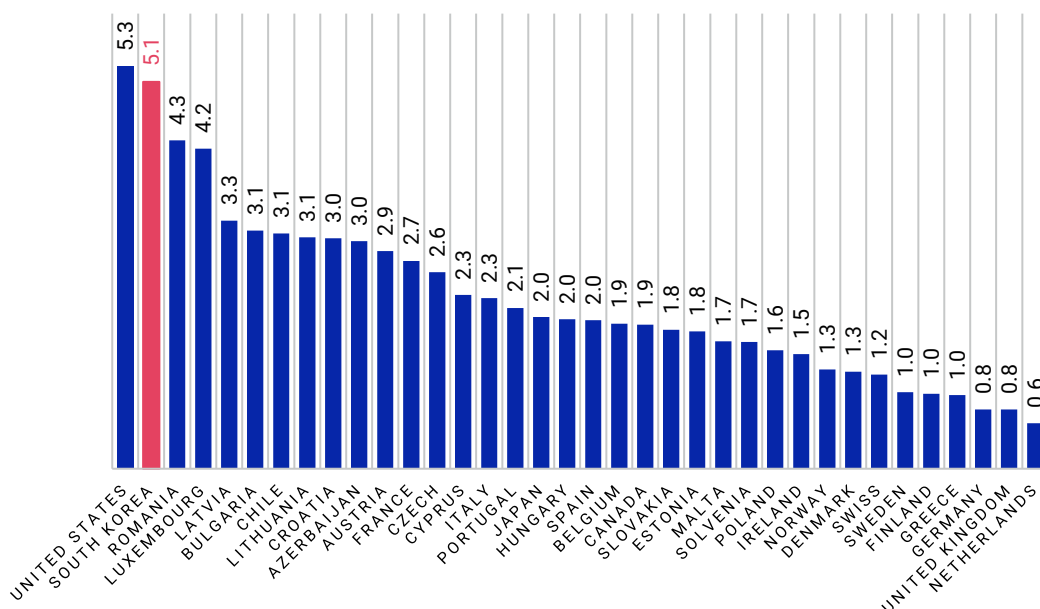
1. All 61 companies in our peer set were exposed to this upcoming regulation in South Korea, according to our analysis of the location of company assets in FY2019. 54% of the companies – or 33 companies – were assessed to be highly exposed to overall H&S risks.
2. All companies except for **GS Caltex** had a low or limited H&S risk management capacity, 26% of which – or sixteen companies – faced contractor accidents between 2018-2021, indicating the highest compliance risk.
3. Only four companies (6.5%) factored health & safety performance into their executive compensation. We also note **none** of them disclosed further detailed scope of pay policy (e.g. percentage of the total pay linked to the goal) or set any measurable targets.
4. Almost 80% of the companies had either no target to improve health & safety performance or zero-target (zero-target is often considered as a mere slogan). Only three companies, **POSCO** (metals & mining), **Samsung C&T** (industrial conglomerates) and **SK Innovation** (Oil, Gas & Consumable Fuels), had a quantitative target including contractors. However, **POSCO** recorded H&S controversies involving contractors, raising questions on the company's implementation of safety programs to a broad scope of workforce.
5. Only **SK Innovation** had leading practices across all four H&S indicators without any ongoing H&S controversies involving contractors.

¹ Out of 426 constituents in the MSCI Korea Investable Market Index (IMI), 61 companies had Health & Safety as a weighted Key Issue (as of February 25, 2021) based on the MSCI ESG Ratings methodology. Unless otherwise noted, this report is based on our assessment of the Health & Safety Key Issue for these 61 companies as of February 25, 2021.

Worker Safety Risk in South Korea

In 2018, South Korea marked the second highest worker fatality rate (per 100,000 employees) among OECD countries following the United States (Exhibit 1). This is partly attributed to the heavy dependence of the South Korean economy on labor intensive sectors such as construction and machinery, as seen from the fact that more than 26% of the share of South Korea's gross domestic product (GDP) in 2018 was contributed by manufacturing alone (vs. 14% OECD average).² Unsurprisingly, labor intensive industries such as construction and machinery GICS industry recorded the highest number of worker safety incidents in 2018 (Exhibit 2).

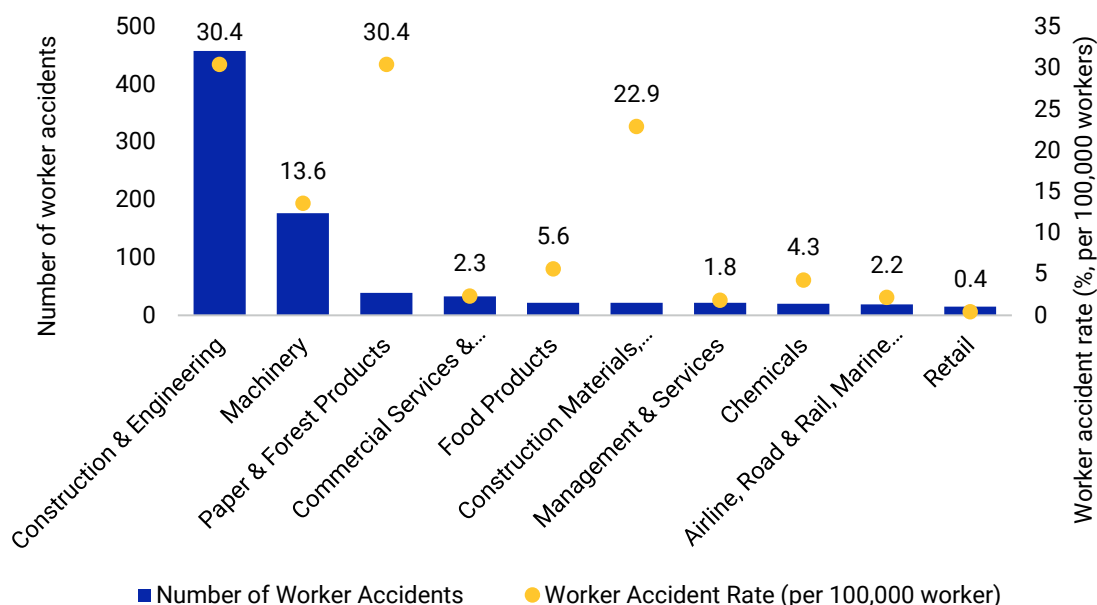
Exhibit 1: Global Fatal Accidents Rate (per 100,000 workers, as of 2018)



Source: MSCI ESG Research LLC, February 2021, International Labor Organizations (ILO), Eurostat, Korea Ministry of Employment and Labor, 2018

² World Bank (2018), World Data Indicators (WDI)

Exhibit 2: GICS Industry-level Fatal Accidents Rate in Korea (per 100,000 workers, FY2018)



Source: MSCI ESG Research, March 2021, Korea Ministry of Employment and Labor, 2018

The New Health and Safety Regulation: Senior Management on Spot

It is common especially among labor-intensive industries to rely on subcontractors and temporary workers for cost saving purposes (Exhibit 3).³ While such practices provide more employee flexibility and less responsibility in case of contractor workplace accidents, companies have faced a public outcry following repeating contractor deaths.⁴ On January 8, 2021, South Korean congress passed a bill that places heavier penalties to the companies with 50 or more employees, which will come into place as early as from January 27, 2022. The enhanced regulations will render the senior management responsible for work-related incidents that involve sub-contractors.

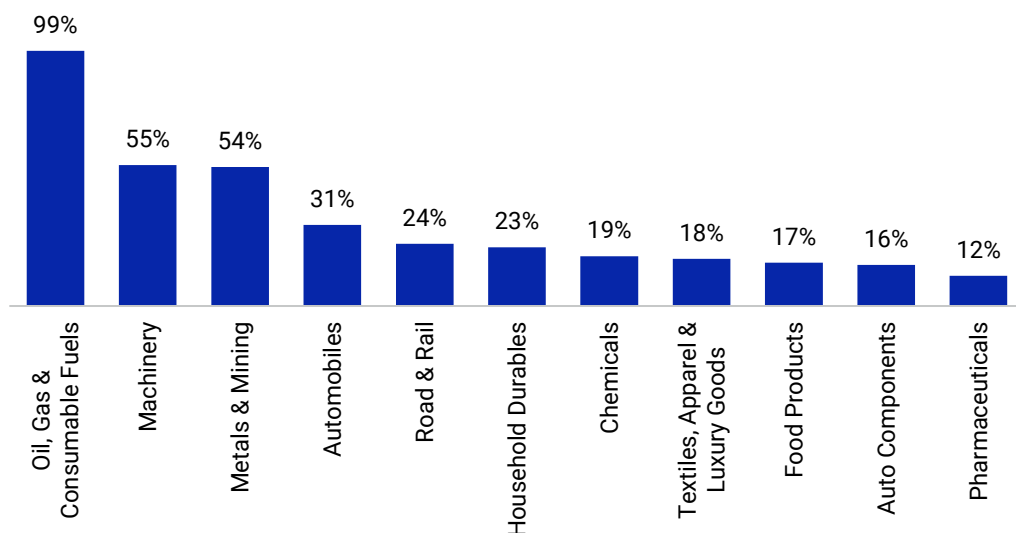
The revised law does not only describe regulatory penalties but also mandate companies to implement both preventive health & safety measures and incident response plan (see Appendix for more details about the regulation). This could incur

³ Choi et al., "In South Korea's dangerous shipyards, subcontracted workers are most at risk." Reuters, October 30, 2019.

⁴ Jo. "Original Contractors Should be Responsible for Subcontractor Accidents.", The Korea Herald, December 16, 2016

additional compliance costs for companies that have not been proactive in setting stringent safety standards such as a policy covering a broad workforce, including contractors and measures to identify potential risks such as conducting accident analysis including Near Misses.

Exhibit 3: Sub-contractor Worker Ratio in South Korea: GICS Industry Average (Companies with More Than 1,000 Workers)



Source: MSCI ESG Research, March 2021, Korea Occupational safety & Health Agency (KOSHA), 2018

Note: The figure above was based on the sample survey (n=125) conducted by KOSHA

Are Companies Ready to Address the New H&S Law?

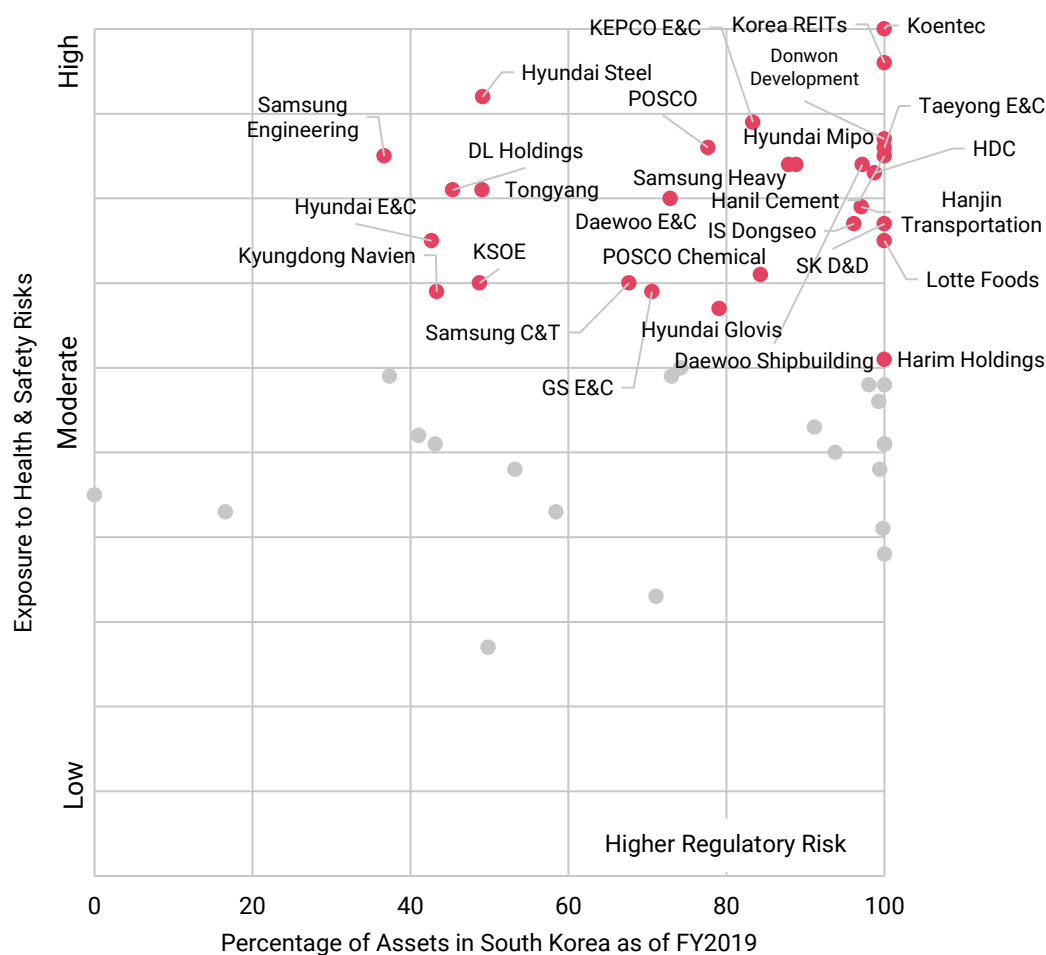
In our MSCI ESG Ratings framework, we identify the Key Issues of financial relevance for each of the 158 General Industry Classification Standard (GICS®)⁵ sub-industries as the basis of our ESG Ratings. Health & Safety Key Issue are generally selected for companies in the GICS sub-industries with relatively high injury and fatality rates compared to other industries. Out of 426 constituents in the MSCI Korea Investable Market Index (IMI), 61 companies in 17 GICS industries had Health & Safety as a weighted Key Issue (See Exhibit 11 in the Appendix).

Of these 61 companies, 33 companies (54%) were assessed to be highly exposed to H&S risks according to MSCI ESG Ratings methodology (Exhibit 4)⁶. South Korea's

⁵ GICS, the global industry classification standard jointly developed by MSCI and Standard & Poor's.

⁶ In our MSCI ESG Rating methodology, H&S risk exposure metrics are calculated based on the potential exposure to risk of incurring increased insurance costs, heightened regulation or operational slowdown due to poor health & safety conditions, calculated based on sector fatality rates in the countries where each firm operates

Exhibit 4: Percentage of Assets in South Korea and Overall Health & Safety Exposure



Note: y-axis indicates the companies' potential exposure to risk of incurring increased insurance costs, heightened regulation or operational slowdown due to poor health & safety conditions, calculated based on sector fatality rates in the countries where each firm operates

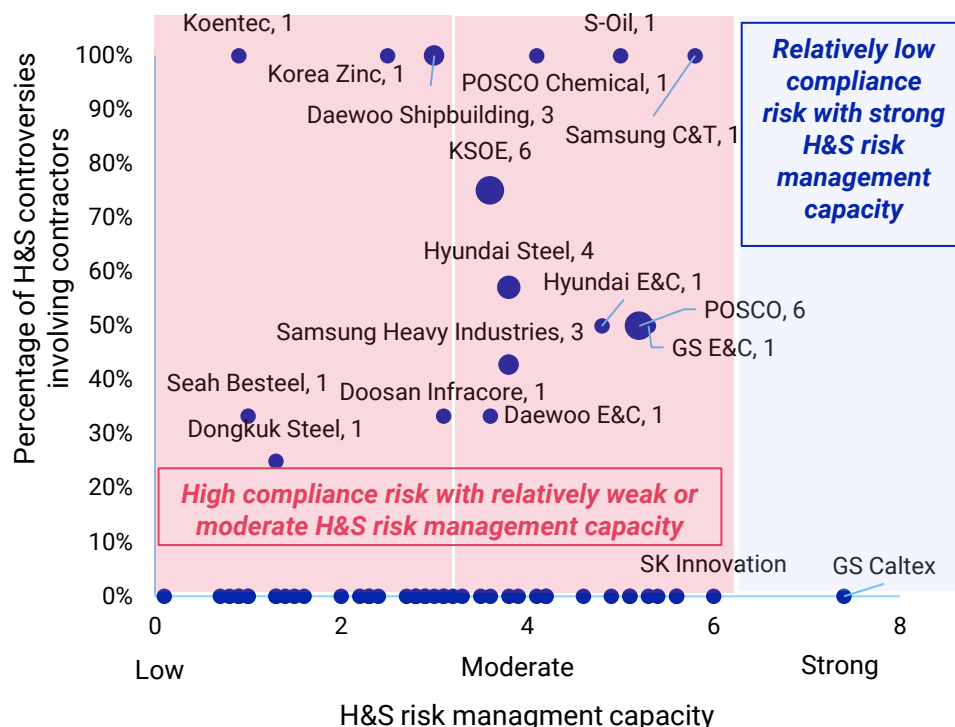
We used controversies data as a proxy to see companies' track record of H&S issues in contractor relations. One ongoing H&S controversy in commercial services & supplies industry involved contractor fatality, more than half of the total controversies involved contractors for machinery (62%), and about half of the total

⁷ Pan Ocean, Doosan Infracore, Doosan Bobcat, HMM, and Korea Line did not separately report the percentage of assets in South Korea but our research finds those companies also have at least some assets located in South Korea as per the company disclosure in FY2019 annual report, thus the new regulation will effectively apply to the companies.

controversies involved contractors for metals & mining industry (47%). This may suggest potentially higher regulatory risk for the companies in these industries (Exhibit 10).

Only **GS Caltex** had relatively strong H&S management practices with no ongoing H&S controversies as of April 28, 2021. On the other hand, we identified six companies at higher regulatory risks that had a low H&S management capacity with at least one ongoing H&S controversies involving contractors (Exhibit 5). **POSCO** (metals & mining) and **KSOE** (machinery) marked the greatest number of ongoing H&S controversies. When it comes to the percentage of H&S controversies involving contractors, in addition to POSCO and KSOE, **Daewoo Shipbuilding (100%)**, **Hyundai Steel (57%)**, **Samsung Heavy Industries (43%)**, recorded the highest, indicating potential compliance risks once the new regulation takes place.

**Exhibit 5: Exposure to Compliance Risks:
H&S Risk Mitigation Capacity vs. Contractor H&S Controversies**



Source: MSCI ESG Research, company disclosure, as of April 28, 2021

Note: Size of the bubble represents the absolute number of contractor H&S accidents based on our

controversies research⁸; H&S risk management capacity indicates our scoring of management quality, based on the existence and extent of policies, performance targets, actual performance over time and instances of past or continuing problems

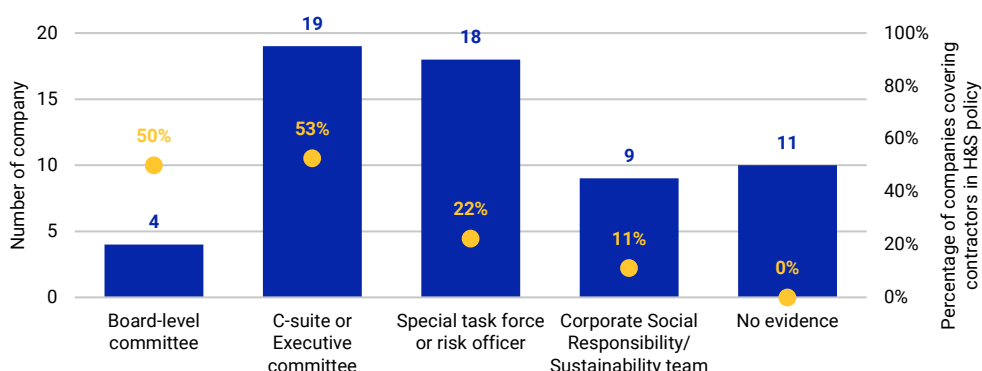
Executive H&S Oversight = Lower Risks?

Since the new regulatory makes senior management responsible for contractor and sub-contractor workplace accidents, it is critical to see whether the companies have executive body oversight responsible for related risks in order to assess the preparedness for the new regulation.

Executive Body Responsible for Health & Safety Practices

Companies with senior management oversight in H&S practices tend to have related policies covering contractors. 38% of the companies had executive committee or board-level oversight of health and safety issues, around half of which had a health and safety policy covering contractors (Exhibit 6). **SK Innovation, SK Materials, GS Holdings and KoreaGas** had board-level oversight in H&S practices and their H&S policy covered contractors. **All of them did not encounter any H&S related controversies involving contractors** (Exhibit 7). On the other hand, we found no evidence in senior management oversight for eleven companies, all of which did not cover contractors in their safety policy. **Seah Besteel was the only company with H&S controversies involving contractors.**

Exhibit 6: Executive Body Responsible for Health & Safety Practices and Related Controversies



Source: MSCI ESG Research, company disclosure, as of March 4, 2021

⁸ MSCI Controversies is designed to address company's involvement in controversial ESG issues, consistent with various international norms. Each company in the MSCI ESG Ratings universe will go through daily monitoring of controversies. For further details on the methodology, see MSCI ESG Controversies Methodology document on ESG Manager (Client access only).

Exhibit 7: Leaders and Laggards in Senior Management Overseeing H&S Practices

Leaders	
Board-level oversight in H&S practices and H&S policy covering contractors	Ongoing H&S controversy (% involving contractors)
SK Innovation	None
SK Materials	None
KoreaGas	None
GS Holdings	1 (0%)
Laggard	
No evidence in H&S overseeing body and H&S policy not covering contractors	Ongoing H&S controversy (% involving contractors)
Seah Besteel	3 (33%)

Source: MSCI ESG Research, company disclosure, as of April 28, 2021

Note: Among four companies with board-level oversight (KoreaGas, SK Innovation, GS Holdings, and SK Materials), we identified leaders for those without any ongoing H&S controversies involving contractors. Among eleven companies with no evidence of H&S overseeing body, only Seah Besteel had H&S controversies involving contractors.

Executive Pay Linked to Health & Safety Performance

In addition to assessing whether companies' management is overseeing H&S practices, setting a measurable target for non-financial key performance indicators (KPIs) could help the management to track and effectively communicate the performance with stakeholders, especially as there are no standardized measures to compare company by company unlike financial metrics⁹. Only four companies (6.5%) factored health & safety performance into their executive compensation (Exhibit 8). We note, however, **none of them disclosed further detailed scope of pay policy (% of the total pay linked to the goal) or set any measurable target in place.**

Exhibit 8: Companies with Health & Safety Measures Linked to Executive Pay

Company	H&S performance as factor in executive compensation detail
Samsung Engineering	Safety rewards, awards for best-performing employees/executives/managers
KSOE	Compensations for the management including executive directors includes evaluation of non-financial performance (safety)
SK Innovation	Incentive compensation for the CEO includes evaluation of created social value (safety, health, environment)
Samsung C&T Corporation	Safety awards and rewards for all employees (ex. 2019 Annual Safety Award Convention)

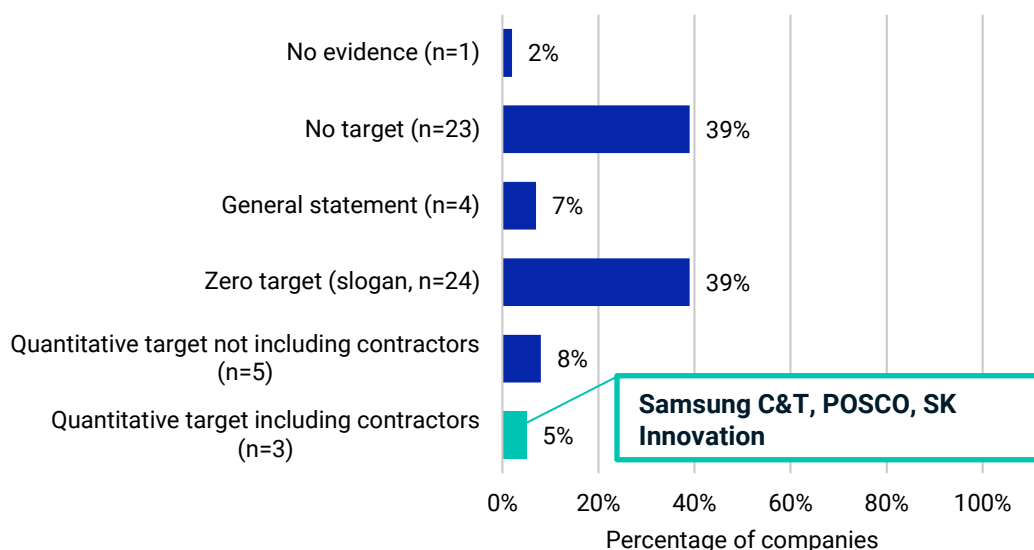
Source: MSCI ESG Research, company disclosure, as of February 25, 2021

⁹ Koors, J. 2019. "Executive Compensation and ESG." Harvard Law, Sept. 10, 2019.

Reducing H&S Risk Through Setting Detailed Targets

In our MSCI ESG Rating methodology, we assess company's risk management in H&S Key Issue through evaluating initiatives including targets in place to improve performance on the issue. Setting a workplace accident reduction target is an effective measure to deploy the company's public safety policy into the real practice. However, **only three companies have set a quantitative target to improve health & safety performance including contractors** (Exhibit 9). **Samsung C&T** was the only company showed a decreasing trend in its workforce safety record, meeting the H&S reduction target (Exhibit 14). **POSCO**, one of the three, has faced the highest number of contractor accidents despite having a policy and target including contractors (see company case study on page 13). Such large number of worker injuries and fatalities may indicate potential lapse in implementation of POSCO's safety programs. On the other hand, the highest percentage of companies (40%) announced "zero target", which aims to achieve zero workplace accident and is considered as a mere slogan. Despite having a strong H&S management practices, the absence of a measurable time-bound H&S reduction target may limit the company's management effectiveness.

Exhibit 9: Health & Safety Reduction Target



Source: MSCI ESG Research, company disclosure, controversy data as of February 25, 2021

Conclusion

South Korea's high worker fatality rate and the common practice to rely on subcontractors and temporary workers especially among labor-intensive industries have translated into a number of contractor fatalities in the market. Against the backdrop of public demands, the South Korean government introduced enhanced H&S regulations to enforce companies to consider contractors when addressing H&S policies and programs as well as to penalize more heavily on those that do not comply with the law. According to our analysis, all 61 companies of the MSCI Korean IMI that had H&S key issue as a weighted key issue will likely to be impacted by the new regulation given their operations in the market.

The four H&S metrics were assessed in the analysis, as the new regulation will make senior management legally responsible for contractor accidents. **Only Samsung C&T showed best practices across all four metrics used to assess H&S risks management. Even so, Samsung C&T has recorded ongoing H&S controversies involving contractors, raising questions on the company's effectiveness in deploying safety programs.** For others, their lack of H&S programs covering contractors may suggest several potential areas to improve ahead of the new regulation. For companies with relatively strong H&S measures in place but also recorded a number of ongoing H&S controversies involving contractors, more robust implementation of those measures may be needed to close the gap. On the other hand, companies trailing leading domestic peers in those four indicators may need to acknowledge and start to address the upcoming compliance risk.

Case Studies

Korea Shipbuilding & Offshore Engineering (KSOE)

The most dominant shipbuilding company in the world, Korea Shipbuilding & Offshore Engineering (KSOE), faces labor challenges, including a poor worker safety record peppered with recurring fatal industrial accidents. Its biggest subsidiary, Hyundai Heavy Industries (HHI), plans an IPO in 2021. However, unresolved wage negotiations with the company's union and multiple accidental deaths of industrial workers have drawn attention to HHI. The Korean Ministry of Employment and Labor in 2020 designated HHI as a "workplace with poor safety management." These problems may become a major risk for the KSOE group and its senior management ahead of the Major Occupational Safety Incident Penalty Act (Major Penalty Act) coming into force in South Korea in 2022.

In addition to HHI's IPO plan, KSOE is set to expand through the acquisition of Daewoo Shipbuilding & Marine Engineering (DSME) in 2021. KSOE already controlled a 18.2% share of the global shipbuilding market, including HHI's 8.4%, in FY 2019. DSME had a 7.5% share of the global shipbuilding market in FY 2019. In that same year, 23 people died in work-related accidents in the South Korean shipbuilding industry; four of those occurred at HHI. In comparison, future unit DSME reported no fatal accidents and industry peer Samsung Heavy Industries had one employee fatality in 2019. Further, KSOE has a high three-year fatality average of 1.33 cases (for 2017-2019, compared with an industry average of 0.75 in the same period). Despite HHI's announcement in 2019 that it would invest USD 270 million to improve its safety management, another HHI worker died in an industrial accident in February 2021. Once the Major Penalty Act is in place, business owners and upper management can be charged with a crime when industrial accidents result in worker deaths. Consequently, KSOE, on the verge of HHI's IPO, faces potential exposure to reputational risk and is considered one of the most vulnerable companies to this crackdown in Korea.

POSCO

POSCO, a Korea-based steel product manufacturing and distributing company, and its construction subsidiary POSCO ENC, continue to suffer repeated worker and subcontractor fatalities. POSCO's lagging health & safety performance versus industry peers and its frequent subcontractor fatalities are likely to pose a major risk to the company and its senior management once the Major Occupational Safety Incident Penalty Act (Major Penalty Act) passed by the National Assembly of South Korea comes into effect in January 2022.

POSCO recorded a three-year worker related accident annual average from 2017-2019 of 15 cases (compared with an industry average of 10 in the same period). During those years, 21 worker deaths were recorded at POSCO's operations, 14 of

which occurred at POSCO ENC construction sites. In contrast, domestic industry peer Hyundai Steel Co. recorded one worker death during the same period. POSCO however lacks quantitative safety incident reduction target, an initiative to help the company to track and improve its H&S performance. In 2020, another six POSCO workers lost their lives, and in response, POSCO said it would invest USD 900 million to improve worker safety conditions and to prevent continuing safety accidents. But three more POSCO workers have died in early 2021, indicating a potential lapse in the implementation of POSCO's safety programs.

The heavy incidence of deaths among POSCO's subcontractors is another problem for the company. Out of POSCO's 21 worker deaths during 2017-2019, 20 were subcontractors, and all of POSCO ENC's on-the-job fatalities were subcontractors. Once the Major Penalty Act is in place, business owners and senior managers will face the regulatory risk of being charged with a crime, should an occupational safety incident occur (which may apply to subcontractor fatalities, in some cases). Consequently, POSCO is considered among the most vulnerable to this crackdown on companies by the Korean government.

Hyundai E&C

Hyundai Engineering & Construction (HENC), the second-largest construction company in Korea in terms of construction capability in FY 2020, has recorded repeated worker and subcontractor fatalities at its operations. HENC's lagging health & safety performance when compared with industry peers and its frequent subcontractor fatalities are likely to pose a major risk to the company and its senior management once the Major Occupational Safety Incident Penalty Act (Major Penalty Act) passed by the National Assembly of South Korea comes into effect in January 2022.

According to the Environment and Labor Committee of the National Assembly, HENC recorded a five-year worker death average of 3.4 cases (versus an industry average 1.4 such deaths for the 30 largest construction companies in Korea between 2016 and 2020). In response to these recent industrial accidents, HENC in 2020 announced an increase of USD 90 million in spending on safety management. The company also said it would apply artificial intelligence at all its construction sites in an attempt to prevent industrial accidents. However, another HENC worker died in March 2021, indicating a potential lapse in the implementation of HENC safety programs.

The heavy incidence of deaths among subcontractors is another problem for the company. Out of HENC's 20 worker death cases during 2016-2020, 18 involved subcontractors. HENC does not disclose exact numbers of injury and fatality cases in its CSR report or elsewhere. HENC lacks quantitative health and safety target to reduce major worker injuries and occupational accidents, and only has general statements which does not cover subcontractors. Once the Major Penalty Act is in

place, business owners and senior managers will face the regulatory risk of being charged with a crime, should an occupational safety incident occur (which may apply to subcontractor fatalities, in some cases). As a result, HENC is considered among the most vulnerable to this crackdown in Korea.

GS E&C

GS Engineering & Construction (GENC), the fourth-largest construction company in Korea in terms of construction capability in FY 2020, has suffered repeated worker and subcontractor fatalities at its operations. GENC's lagging health & safety performance when compared with industry peers, including frequent fatalities among subcontractors, is likely to pose a major risk to the company and its senior management once the Major Occupational Safety Incident Penalty Act (Major Penalty Act) passed by the National Assembly of South Korea comes into effect in January 2022.

The company has established health and safety management system based on external standards such as OHSAS 18001, and has a group-wide health and safety policies. Despite having H&S programs, in 2020, GENC recorded five worker deaths, the most out of the 40 total fatalities at the 100 largest construction companies in Korea. And in February 2021, another GENC worker died, indicating a potential lapse in the implementation of GENC's safety management. Moreover, GENC lacks quantitative health and safety target to reduce major worker injuries and occupational accidents, an initiative to support the company to monitor and improve its H&S programs in its operations.

The heavy incidence of worker accidents among subcontractors is another problem for the company. Out of GENC's 28 industrial accident cases during 2016-2020, 25 affected subcontractors. Once the Major Penalty Act is in place, business owners and senior managers will face the regulatory risk of being charged with a crime, should an occupational safety incident occur (which may apply to subcontractor fatalities, in some cases). As a result, GENC is considered one of the more vulnerable to this corporate crackdown in Korea.

Daewoo E&C

Daewoo Engineering & Construction (DENC), the sixth largest construction company in Korea in terms of construction capability in FY 2020, has had repeated worker and sub-contractor fatalities at its operations. DENC's lagging health & safety performance compared with industry peers, including frequent fatalities among subcontractors, is likely to pose a major risk to the company and its senior management once the Major Occupational Safety Incident Penalty Act (Major Penalty Act) passed by the National Assembly of South Korea comes into effect in January 2022.

According to the National Assembly's Environment and Labor Committee, DENC recorded a five-year worker death annual average of 4.4 cases between 2016 and 2020 (compared with an industry average of 1.4 for the 30 largest construction companies in Korea in the same period). Heavy incidence of deaths among subcontractors is another problem for the company. All the 20 DENC worker deaths from 2016 to 2019 were subcontractors. DENC does not disclose exact numbers of worker deaths in its CSR report or elsewhere. The company has established health and safety management system based on external standards such as OHSAS 18001, and has a group-wide health and safety policies. However, the policies do not apply to subcontractors. DENC also lacks quantitative health and safety target to reduce major worker injuries and occupational accidents unlike its leading peers in the industry that include contractors in its H&S reduction target. Once the Major Penalty Act is in place, business owners and senior managers will face the regulatory risk of being charged with a crime, should an occupational safety incident occur (which may apply to subcontractor fatalities, in some cases). As a result, DENC is considered one of the more vulnerable companies to this crackdown in Korea.

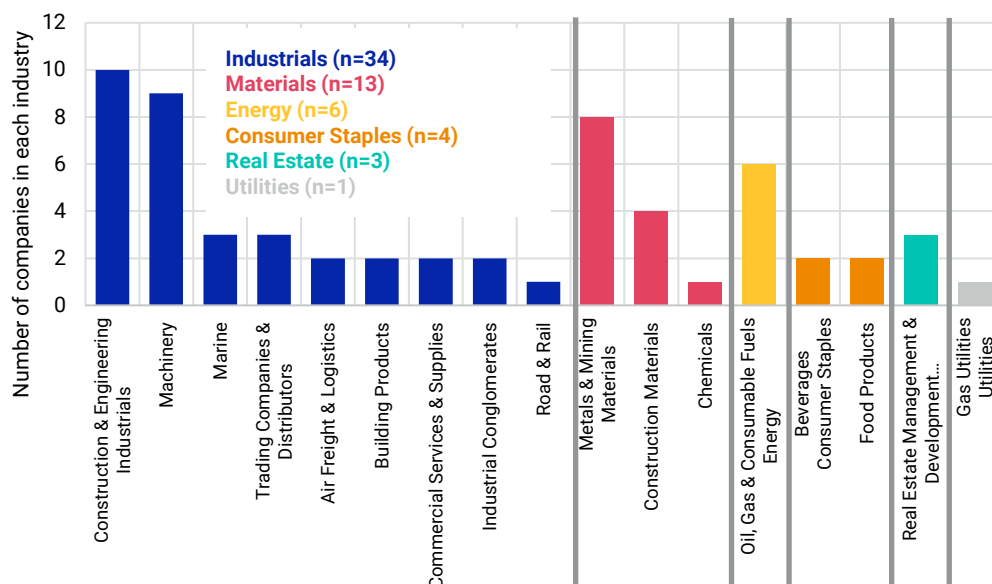
Appendix

Exhibit 10: South Korea's New Worker Health & Safety Regulation

Type of Accidents	Penalty Against Senior management (CEO, board, safety officer)	Penalty Against Company	Punitive damage
Fatality	Imprisonment more than 1 year, or criminal fine up to KRW 1 billion (USD 952,000)	Up to KRW 5 billion (USD 4.7 million)	Within the range of 5 times of incurred cost of damage
2+ worker accidents requiring more than 6 months treatment	Imprisonment up to 7 year, or criminal fine up to KRW 100 million (USD 95,000)	Criminal fine up to KRW 1 billion (USD 952,000)	
3+ occupational diseases within 1 year			

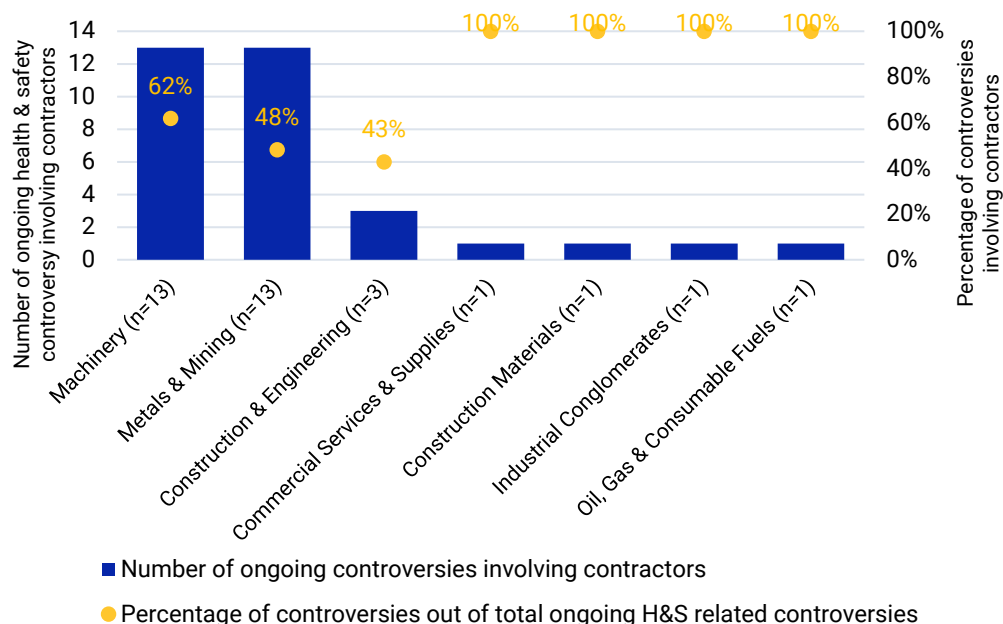
Source: MSCI ESG Research, Korea Ministry of Employment and Labor, as of February 25, 2021

Exhibit 11: Companies in MSCI Korea IMI with Weighted Health & Safety Key Issue by GICS Industry



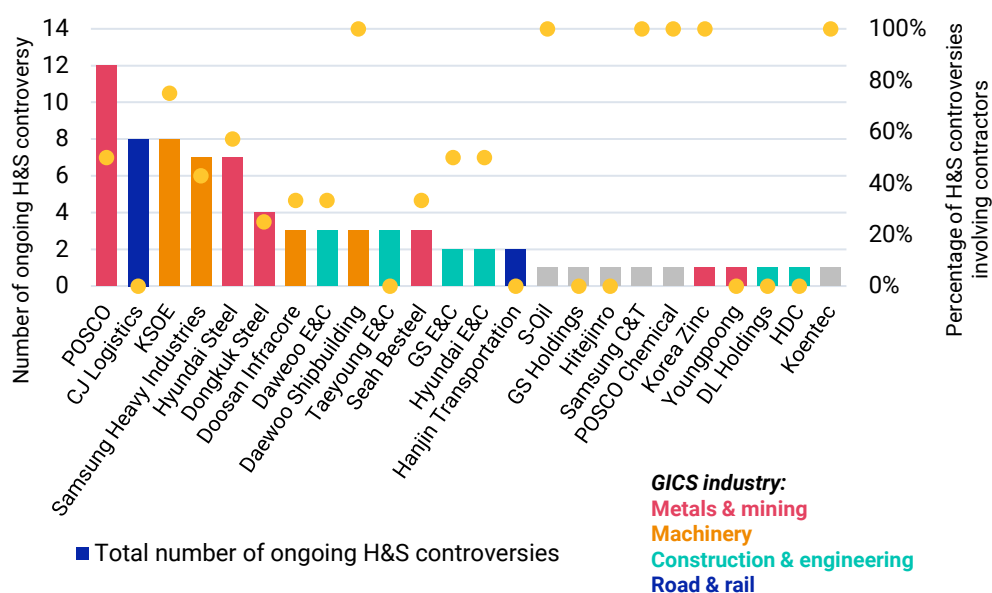
Source: MSCI ESG Research, company disclosure, as of February 25, 2021

Exhibit 12: Ongoing H&S Controversies Involving Contractors by GICS Industry Among Korean Companies



Source: MSCI ESG Research, company disclosure, as of April 28, 2021

Exhibit 13: Companies with Highest Number of Health & Safety Related Controversies



Source: MSCI ESG Research, company disclosure, as of April 28, 2021

Exhibit 14: Leaders and Laggards in H&S Target and Performance

Leaders			
Quantitative target including contractors	% of CAGR in Lost Time Injury Rate (LTIR per million hour), 2016 to 2019	H&S target year	On track to achieve target?
Samsung C&T	-23%	2019	Yes
POSCO	4%	2019	No
SK Innovation	36%	2025	No
Laggard			
No evidence in H&S overseeing body and H&S policy not covering contractors	% of reduction in Lost Time Injury Rate (LTIR per million hour), 2016 to 2019		
Seah Besteel	No disclosure		

Source: MSCI ESG Research, company disclosure, as of April 28, 2021

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