

CARBON FOOTPRINT AND CLIMATE RISK ASSESSMENT REPORT OF VIETNAM HOLDING'S INVESTMENT PORTFOLIO, 2021

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EXECUTIVE SUMMARY

Since 2015, Vietnam Holding Limited (VNH) has requested Energy and Environment Consultancy JSC (VNEEC) to conduct annually independent assessments of its portfolio's carbon footprint. In 2021, VNH has extended the service to incorporate a comprehensive climate risk assessment, i.e., including both transition and physical risks of climate change on the enterprises in the VNH portfolio.

The 2021 report has been done in the context of dramatical changes in climate change policies of Vietnam and international levels. The notable policies are the commitment to achieve "Net-zero emission" for Viet Nam by 2050 and the issuance of the Government on management of GHG emission that will impose first time the reporting and emission reduction plan on big emission entities.

In 2021, the VNH's investment portfolio has a total of 9,056 tonnes carbon dioxide equivalents (tCO₂e) emission from Scopes 1 & 2. The carbon footprint of the portfolio in 2021 is significantly lower when compared against the benchmark of an equivalent investment size in VNAllShare Index, with 67.0% or 18,382 tCO₂e less total carbon emissions. The total carbon emissions of 2021 Portfolio is also much lower than that of 2020 Portfolio (9,056 and 21,045 tonnes of CO₂ equivalents, respectively). This positive performance was resulted mostly from good sector allocation, with a small contribution from stock selection.

In conjunction with transition risks, i.e., policy, legal, technology, market, and reputation risks that attach with and drive the transition to low-carbon economy, most of VNH investment is allocated in sectors that are less susceptible to transition risks. In terms of Weighted Average Carbon Intensity (WACI), which is the measure of GHG emissions/ \$M of revenue, VNH performance is better than most current MSCI indexes. This is the direct result of good investment decisions, which focused a large amount of investment in low carbon-intensive sectors, such as Financials and Real Estate.

In terms of implied temperature rise, the current VNH portfolio's emissions are within the Climate Action Tracker fair share emissions budget. It means the VNH emissions is aligned with the 2°C fair share scenario. However, under the net-zero scenario, VNH 2021 portfolio is not yet aligned and offsetting its GHG emissions in this scenario with the highest carbon price could cost VNH up to \$2,881,247.

Meanwhile VNH could also face a financial damage up to \$440,615 due to physical risks causing by exposing to acute natural disasters. The financial loss of VNH's Portfolio from natural disasters is caused significantly by storms (57.03%) and floods (42.95%), while droughts only accounts for 0.02% of the total loss. Under the worst-case scenario, in the 2022-2050 period, the overall transition and physical risks may cost VNH up to \$3,321,862 annually, which is 2.2% of the VNH Investment in 2021.



This report provides a good overview and ex-post assessment of the performance of VNH's portfolio in terms of GHG emissions, as well as insightful understandings of the potential impacts of climate-related risks (transition and physical risks) on VNH portfolio. Thus, this study will support VNH in making climate risk-informed investment decisions, and to create investment strategies that include suitable GHG emissions reduction targets aligning with national context, and visionary plans to reach these targets

The continuing and pioneering efforts of VNH for regular assessment of its portfolio carbon footprint and climate risk assessment sets a good case in the Vietnam's equity market in terms of investment taking into account climate impacts and risks.