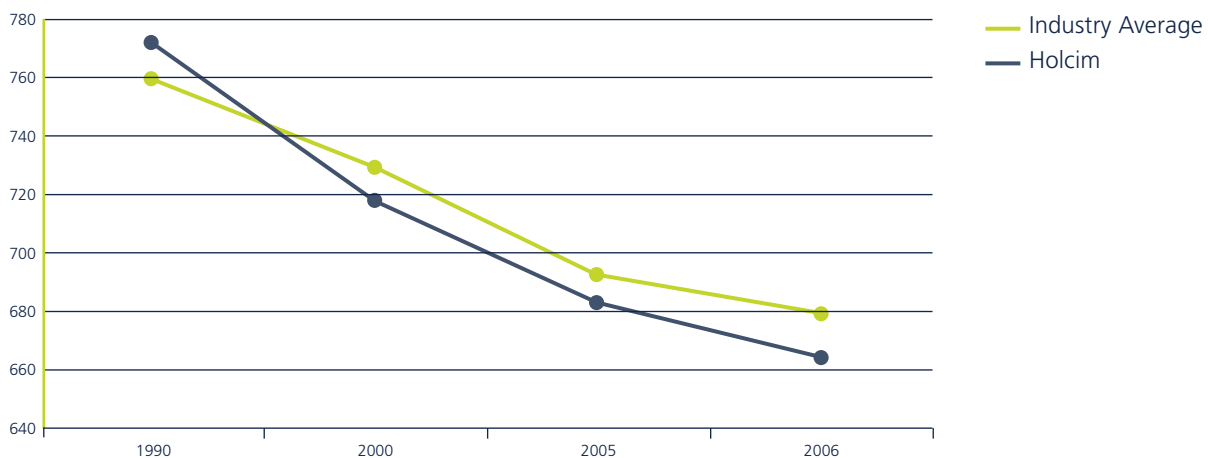


## Sustainability Trend in the Cement Industry

# Climate Change Mitigation through Efficient Cement Production

**AVERAGE GROSS CO<sub>2</sub> EMISSIONS PER TON OF CEMENT PRODUCT**  
(kg CO<sub>2</sub> / ton of cement)



Source: SAM, Proprietary database for corporate sustainability

The cement industry often gets a bad rap during emissions and climate change discussions because cement production is a major source of CO<sub>2</sub> emissions. However, the cement industry has been working hard to do its part for climate change mitigation. The amount of CO<sub>2</sub> needed to produce a ton of cement has dropped significantly, and many companies have aggressive targets for further reductions in the years to come. How do they do it? Cement is made by heating limestone with small quantities of other materials (such as clay) in a kiln. The resulting hard substance is called clinker, and its production causes a large part of cement related emissions. The amount of clinker needed can be reduced by cement companies by substituting raw materials such as fly ash or

blast furnace slag which ultimately reduces emissions during cement production. Alternative fuels can also be used to fire the kiln, and companies are updating old production facilities with new efficient technologies.

SAM sees the most efficient cement producers as having a competitive advantage and also as more prepared to handle any carbon pricing the industry may face in the future.



**Michael Riley**  
Equity Analyst

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**SAM Sustainable Asset Management**

Josefstrasse 218 · 8005 Zurich · Switzerland · Tel. +41 44 653 10 10 · Fax +41 44 653 10 80  
info@sam-group.com · www.sam-group.com