

Investing in a Sustainable Future

Emerging and frontier markets' pivotal role in building a more sustainable world

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Summary

- Emerging and frontier markets offer exposure to compelling structural growth opportunities
- Emerging economies are increasingly taking a cleaner, more sustainable path towards development
- There is a large investible opportunity set of sustainable emerging market companies that have the potential to generate significant growth, while contributing to achieving UN Sustainable Development Goals (SDGs)
- Investing in sustainable development does not have to compromise financial returns; several emerging market companies are leading innovators in many growth areas that advance sustainable development
- Navigating the disclosure and information gaps in these markets can help with uncovering differentiated and exciting sustainable investment opportunities.
- ¹ World Bank WDI, HSBC (from HSBC Demographics Report, September 2022)
- ² United Nations World Population Prospects 2022 (https://population.un.org/wpp/)
- ³ According to Moody's, failure to act on climate issues will have negative economic consequences everywhere, but EM are projected to be the most impacted with Africa, Asia-Pacific, the Middle East, and Latin America expected to suffer larger losses in real GDP terms, 3-5%, compared to Western Europe and North America, 1-2%.

Introduction

Emerging and frontier economies offer some of the largest structural long-term growth opportunities in the world today. As the world balances progress in human development standards with a more sustainable future for the planet, investors in emerging and frontier economies play a pivotal role.

We see a large investable opportunity set across social and environmental angles to support emerging economies as they embark on a cleaner and more socially inclusive development path.

Emerging and frontier markets: The powerhouses of global economic growth

Emerging and frontier markets are on track to add over one billion middle- and high-income¹ consumers to the world's population over the next two decades. Nearly 25% of the world's population² should see an unprecedented rise in spending power as these economies develop and demand access to affordable and quality healthcare, education, financial, digital and sanitation services.

Low levels of access to basic essential services, large addressable markets, and high rate of technological adoption create a large investable universe of compelling growth opportunities. Companies supporting financial inclusion, access to education, healthcare, sanitation, renewable energy, and digital services face a potential multi-decade growth runway ahead.

At the same time, it is clear that emerging economies must take a cleaner, more environmentally sustainable path towards development. Climate change has far-reaching and potentially devastating impacts on our planet and societies. Developing markets will likely face disproportionately greater risk³ to their economies from global warming as increasingly extreme weather patterns result in increased food insecurity, social instability, and geopolitical unrest.

Emerging and frontier markets play a crucial role in the energy transition. Much of the raw material supply chain essential to the electrification of industry and decarbonisation of the global grid lies in these geographies. Clean extraction of materials while supporting economic progress in local communities and protecting biodiversity is key. In addition, many emerging and frontier companies are leading the way downstream, exporting innovation in areas such as fintech, renewable energy supply chain, electric vehicle manufacturing and battery technology.

We believe that emerging and frontier markets offer a unique opportunity to invest across countries and sectors in support of both social and environmental goals.

History shows (Chart 1) that as GDP per capita rises, CO2 per capita rises with it. For example, since 1980, China has lifted over 750m people out of poverty to become the second largest economy in the world.⁴ In so doing, China has become the largest absolute emitter of CO2 globally.⁵ Emerging markets like Indonesia and India that are developing rapidly face the same challenge in limiting carbon emissions while in the pursuit of economic growth.

Chart 1: Annual Per Capita CO2 emissions from fossils fuel & industry

"It is clear that emerging economies must take a cleaner, more environmentally sustainable path towards development. They likely face disproportionately greater risk from global warming as increasingly extreme weather patterns result in increased food insecurity, social instability, and geopolitical unrest."



Source: Global Carbon Budget (2023); The information shown above is for illustrative purposes. Past performance is not a guide to future results.

A more sustainable path forward: Challenges and opportunities

Despite increasing awareness and capital allocation to these areas, it is estimated that the investment gap in developing countries to achieve the UN SDGs has increased from US\$2.5 trillion annually in 2015 to more than US\$4 trillion per year in 2023.7

According to a 2021 report⁸ by Nicholas Stern, Chair of the Grantham Research Institute on Climate Change and the Environment, an estimated US\$2.6 trillion - US\$3.2 trillion in annual global investments will be needed to deliver on the transition to a low-carbon economy. 75% of this funding is needed outside of the world's seven largest developed economies.

Governments and the public sector play a critical role in financing the implementation of the SDG agenda and have made significant policy commitments towards targets. However, businesses and investors have an important role to play in financing these needs.

Chart 2: Sectors where the estimated annual SDG investment gap in developing economies is greatest (2023 – 2030e)

		Estimated annual investment gap to reach the SDG's by 2030E (US\$, trn)
7 Constant Level Constant lev	Energy Installations for renewable energy generation, all sources	\$2.2trn
6 ACCANANCE AND	Water & sanitation Provision of water and sanitation to industry and households	\$0.5trn
3 AN WELTING	Health Investment in health infrastructure (e.g. new hospitals)	\$0.4trn
9 малянинин	Infrastructure Transport infrastructure, power generation and distribution (except renewables), telecommunications	\$0.4trn
13 adau	Biodiversity Nature conservation, sustainable fishing practices, ocean pollution control and sustainable forestry	\$0.3trn
2 #98 ****	Food & agriculture Investment in agriculture, research, rural development	\$0.3trn
4 course	Education Infrastructural investment (e.g. new schools)	\$0.2trn

- ⁴ Lifting 800 Million People Out of Poverty New Report
- Looks at Lessons from China's Experience (worldbank.org) ⁵ Greenhouse Gas Emissions by Country 2023 (worldpopulationreview.com)
- 6 Low-income economies are defined as those with a GNI per capita, calculated using the World Bank Atlas method, of \$1,135 or less in 2022; lower middle-income economies are those with a GNI per capita between \$1,136 and \$4,465; upper middle-income economies are those with a GNI per capita between \$4,466 and \$13,845; high-income economies are those with a GNI per capita of \$13,846 or more. Source: World Bank.
- 7 UNCTAD's World Investment Report 2023
- 8 G7-leadership-for-sustainable-resilient-and-inclusiveeconomic-recovery-and-growth.pdf (lse.ac.uk)

Source: UNCTAD's World Investment Report 2023, Redwheel. Forecasts and estimates are based upon subjective assumptions.

As long-term public market investors, we are excited by the investment opportunity that these funding gaps present. We estimate that the combined market capitalisation of publicly listed companies in sustainable sectors in our markets is approaching USD 5 trillion, presenting a wide breadth and depth of companies that are still valued at half that of the US market.

Investing in sustainable development in emerging markets presents investors with a unique dual opportunity set. Emerging market companies are leading innovators in many areas, such as exporting technological solutions aiding in the energy transition. For example, the investable public market opportunity set today in Renewable Energy is twice as large in emerging markets as that of the US.

At the same time, we see large opportunities within social sustainability where EM companies and countries have the ability to "catch up" with developed market counterparts. Emerging market healthcare companies have a combined market cap that is three times smaller than that of the US, and investors here can help drive greater access to healthcare while improving efficiency of healthcare expenditure. The education, food retail, and pharmacy opportunity set combined is today valued at less than half of the US's, despite emerging and frontier markets being home to 88% of the world's population today⁹, representing areas of potential for sustainable, structural growth.



Chart 3: Investable Market Cap (USD billions) in sustainable sectors across US and EM

Source: HSBC, as at January 2024. The information shown above is for illustrative purposes.

Real change can be meaningful: Economic benefits and financial returns

We believe investing behind the Sustainable Development Goals creates real change and tangible economic benefits. A recent 2023 report¹⁰ from the UN Global Compact estimates that:



Between 2015-2022, an estimated 2.3 billion people were connected to the internet, generating more than \$3.4 trillion in economic output. Expanding internet access from 5.3 billion to 7.4 billion people between 2023 and 2030 is projected to generate more than \$3.2 trillion in economic output.



Between 2015-2022, increasing the global total gross microfinance lending portfolio from \$97 billion to \$162 billion generated an estimated \$179 billion in economic benefits via new loan origination and social returns. Increasing the global lending portfolio at the same rate over the next 7 years to \$360 billion could generate more than \$544 billion in economic benefits via new loan origination and social returns.



Between 2015-2022, increasing annual global vaccine expenditures from \$5.2 billion to \$6.9 billion generated an estimated \$939 billion in economic benefits. Increasing annual global vaccine expenditures between 2023-2030, from \$6.9 billion to \$9.5 billion, could generate more than \$1.3 trillion in economic benefits.



If copper, aluminium, and steel producers increased their share of recycled inputs on par with 2050 goals, it would save 1.8 billion metric tons of CO2 emissions and result in more than \$54.3 billion in savings.

Companies that contribute to the SDGs therefore play a crucial role in accelerating economies, which, in turn, can translate into robust financial tailwinds for these companies and their investors.

The companies in our investment universe tend to be growing their markets as they expand access to essential products and services. Companies that add real positive impact to the lives of their customers, employees, and shareholders often see greater consumer loyalty, increased brand value, and market share gains. These are often the drivers of durable competitive advantages and tend to be rewarded by the market.

Emerging and frontier markets are often painted as posing a challenge to global sustainable economic growth. As investors with a long-track record and deep understanding of these markets, we see it differently.

We strongly believe that emerging and frontier countries and their companies can, and will need to, represent the solution to the world's sustainability challenges. Furthermore, investing in sustainable development does not have to mean compromising on financial returns. However, to do so requires plugging disclosure and information gaps in these markets in order to uncover differentiated and exciting sustainable investment opportunities.

"Improving quality of life without borrowing from the future is the single largest investment opportunity in history." Al Gore

Sustainable Themes in Focus

The Redwheel Sustainable Emerging Markets Strategy focuses on both social and environmental goals to support just and sustainable growth.

We see four thematic areas that cover the most urgent challenges.

Our social goals, **Equality** and **Wellbeing**, focus on identifying key geographies and demographics that could benefit from greater financial inclusion, education and empowerment opportunities, access to and quality of food and nutrition, as well as healthcare services.

Our environmental goals, **Sustainable Societies and Environment**, as well as **Climate Action**, identify companies that contribute to solutions in renewable energy and energy efficiency, and address the needs of an increasingly urbanised population while minimising impact on the environment.

Chart 4: Strategy thematic focuses aligned with SDGs



The information shown above is for illustrative purposes.

Each of our investment themes is aligned with a primary SDG, but we recognise that the SDGs are interlinked and cannot be achieved in isolation. In addition, progress in one goal often accelerates progress in other goals: for example, financial inclusion is a necessary step towards solving for other social challenges and improving general well-being¹¹, by empowering people and communities to meet basic needs, such as nutritious food, clean water, housing, education, and healthcare.

Chart 5: Financial inclusion can lead to improvements in other social goals



Source: https://www.worldbank.org/en/publication/globalfindex/Data; The information shown above is for illustrative purposes.

Spotlight on the Redwheel Sustainable Emerging Markets Team

The Redwheel Sustainable Emerging Markets Team invests in leading companies that play into compelling growth opportunities while making a real positive difference to the world – tapping into the US\$4 trillion annual investment opportunity presented by the UN SDGs investment gap in developing countries.⁷

The Team leverages several decades of emerging and frontier markets investment experience and in-house sustainability expertise, including navigating the disclosure and information gaps in these markets, to uncover differentiated and exciting sustainable investment opportunities.

Equality: **Financial Inclusion through** traditional financial services

Financial inclusion forms the cornerstone of equitable growth. Successful financial inclusion can enable further spending on education, modernisation of infrastructure and healthcare that in turn ensures that growth is sustainable from a social perspective.

Financial inclusion enhances resilience of individuals and small businesses and is an enabler and accelerator of broad-based economic growth.¹² Financial resilience has been proven to lead to better outcomes in health, education, and general standard of living. Affordable access and usage of quality financial services helps families and small business owners generate income, manage cash flow, invest in opportunities, and work their way out of poverty, leading to improved financial health and enabling other social goals.

Today, worldwide bank account ownership has reached 76% of adults (aged 15+); in developing countries, 71% of adults (aged 15+) have an account. However, financial access has not been broad-based, and we find large variances in penetration – from 5.8% in South Sudan to 84% in Brazil, according to the 2021 World Bank Global Findex.

Financial exclusion remains greatest among traditionally underserved groups, including the poor, women, smallholder farmers, and micro, small, and medium-sized enterprises (MSMEs).13

The strategy invests in microfinance institutions and mainstream banks that offer microfinance loans and financial education to unbanked or underbanked populations, with mission-oriented management teams, and a strong balance sheet.

Case Study: Gentera

- Market Cap: \$2bn
- Average Daily Trading Volume (ADTV): \$4.7m
- Country: Mexico
- SDG 1: No Poverty
- Sustainable Revenues: 100%

In Mexico¹⁴, financial inclusion falls below that of countries with similar levels of development, with just 37% of adults having access to financial accounts, and less than a third of adults having made or received digital payments as of 2022. An 8% gender gap between male and female access to financial accounts further exacerbates inequality in the country.

Gentera is a microfinance organisation in Mexico and Peru which offers accessible and affordable financial products and services to populations otherwise unable to access these services, due to distance, appropriateness, cost, or financial knowledge.

The organisation serves over 4 million clients, with female entrepreneurs making up nearly 90% of its borrowers in Mexico. Amongst its many offerings, the Credito Mujer program is designed for female entrepreneurs. Credito Mujer loans are disbursed in a community-based group-lending format of 10-50 women, with loan officers teaching financial literacy and accountability to new users of credit in weekly group meetings.

"In Mexico

only **37%**

of adults have access

to financial accounts."

Group-based loans reduce the number of non-performing loans and therefore the cost of capital for Gentera, which allows the company to extend more loans at lower costs and reach more users.

Building from a base of responsible and profitable growth, Gentera has grown from its roots as a non-governmental organization in 1990 offering small loans to lower income, female entrepreneurs, to offering a broad portfolio of financial solutions such as working capital loans, insurance, savings and payment channels, and financial education to a broader segment of the population.

¹² Financial Inclusion | United Nations | UNSGSA Queen Máxima ¹³ 2021 World Bank Global Findex Data (worldbank.org)

¹⁴ Expanding Financial Access for Mexico's Poor and Supporting

Economic Sustainability (worldbank.org)

Equality: Empowerment through Education

Investing in the human capital of emerging and frontier countries is essential to help supercharge the regions' demographic dividend and drive growth and development. 53% of children in low- and middle-income countries suffer from learning poverty¹⁵, a measure of illiteracy developed by the World Bank. Learning poverty not only exacerbates disparities in nutrition, health and access to essential social protection, but also hinders more advanced skill development, which reduces workforce productivity and adaptability.

In addition, higher education is a vital underpinning of economic growth and a launchpad for social mobility. The World Bank estimates that each additional year of schooling provides a nine percent increase in wages, and improves demographic and health outcomes, contributing to decreases in infant mortality and fertility.¹⁶

The education market is ripe for disruption and acceleration by advances in technology. The global education market is estimated to reach an estimated US\$8 trillion in value by 2030, from US\$6 trillion in 2022, accelerated by the use of technology in education which democratises learning, the spread of technology, and increased scalability of quality instruction.¹⁷ The strategy seeks to invest in educational companies offering services spanning K-12 to higher education, technical vocational training, and full-time and part-time study.

Case Study: Ataa Educational Company

- Market Cap: \$855m
- ADTV: \$1.3m
- Country: Saudi Arabia
- SDG 4: Quality Education
- Sustainable Revenues: 100%

Ataa Educational Company is a traditional educational services provider to students in Saudi Arabia.

With Vision 2030, Saudi Arabia has committed to an ambitious cross-sectoral reform agenda.¹⁸ The education system is at the forefront of the country's effort to diversify its economy; focusing on developing human capital is crucial if Saudi Arabia is to transition to a balanced and sustainable economy that is less dependent on fossil fuels and public sector employment.

Ataa has a portfolio of national and international schools with a wide price range that is playing into the Saudi government's efforts to increase the quality of education by engaging private schools. The growing demand/need comes from more females joining the workforce and therefore needing education, as well as the general growth of the Saudi population – both immigrants and locals. Enrolments in the Kingdom are expected to grow at over 8% p.a. to 2030 while the Vision 2030 program targets 25% of students to be enrolled in private education.

As of Q2 2023, Ataa company operated 21 schools serving over 44k students from a range of income groups, making it the second largest private player in the market. It has a clear strategy for greenfield expansion, adding three new schools by 2025, which will allow it to tap into the underlying growth in the sector in a potentially profitable way.



Source: HSBC. Forecasts and estimates are based upon subjective assumptions.

¹⁵ Learning Poverty is a combined measure of schooling and learning. (worldbank.org)

- ¹⁶ Education Overview: Development news, research, data | World Bank
- ¹⁷ Global Education System: An \$8 Trillion Reboot | Morgan Stanley

18 Education in Saudi Arabia.pdf (moe.gov.sa)

Health is the third primary basic need for improved quality of life and greater human development, in addition to housing and education. Better health contributes to more rapid GDP per capita growth; healthy workers are more productive and improving health outcomes is necessary for prosperity.

The strategy seeks to invest in the full range of the health sector, from health care providers – such as telehealth services, hospitals and pharmacies, to pharmaceutical manufacturers and drug innovators.

Case Study: Samsung Biologics

- Market cap: \$45.4bn
- ADTV: \$35m
- Country: South Korea
- SDG 3: Good Health and Well-being
- Sustainable Revenues: 100%

Since 1960, there has been a 50% absolute increase in life expectancy in less developed countries.¹⁹ We believe this has been driven by the rapid transformation of health solutions, health access and delivery, and disruption of traditional channels with global benefits.

Biological drugs require living organisms for production, making them harder to produce than simple chemistry and manufacturing line assembly. As a result, not only are these drugs expensive and time-consuming; the technology is also hard to replicate. Globally, only a handful of companies have the ability to manufacture these at scale, resulting in a highly concentrated market.



Samsung Biologics, based in South Korea, is the world's largest Contract Development & Manufacturing Organisation (CDMO) and is exposed to the fast-growing global biologics market. Serving over 100 clients globally, the company boasts an order backlog in excess of \$12bn as of Dec 31 2023 which has enabled it to profitably grow its capacity. Its fourth plant was completed in 2022, and it plans to open its fifth in 2025 having received orders to operate Plant 4 at full capacity. The company has also announced plans to build another three plants by 2032.

Source: Samsung Biologics

Sustainable Societies and Environment: Sustainable Built Environment

According to the United Nations Population Division²⁰, 68% of the planet's population will live in urban areas by 2050, up from 55% in 2018. The projected rapid pace of urbanisation in emerging and frontier countries will likely compound stressors on infrastructure and essential resources such as energy and water. Much of the emerging and frontier populations still lack access to basic water, sanitation and sewage treatment services.

The strategy seeks to invest in companies expanding access to basic services and investing in resilient infrastructure.

Case Study: Sabesp

- Market Cap: 8.2bn
- ADTV: \$36m
- Country: Brazil
- SDG 6: Clean Water and Sanitation
- Sustainable Revenues: 100%

Despite having one of the largest economies and highest water availability in the world, Brazil's population faces deep inequalities in access to water and sanitation. Out of a population of 212 million people, 30 million people (14% of the population) lack access to a reliable, safely managed source of water, and 109 million people (51%) lack access to safely managed household sanitation facilities.²¹

São Paulo, in particular, faces challenges in sewage infrastructure, pollution of drinking water reservoirs that are surrounded by slums, water scarcity leading to conflicts with the north, inefficient water use, and flooding. Per the company website, Sabesp currently supplies 28.4 million customers with running water; and 25.2 million people with sewage collection services in the State of Sao Paulo.²²



Sabesp is a state-owned Brazilian water and waste management company that provides water and sewage services to residential, commercial, and industrial users. As the largest water and sewage provider in Brazil, Sabesp plays an important role in fulfilling Brazil's new mandate to universalise access to water for 99% of the population and sewage treatment for 90% of the population by 2030. Sabesp has a long runway to grow water connections, sewage collection, and water treatment further. Additionally, the company's impending privatisation could further improve efficiencies and accelerate growth.

Sabesp has a strong commitment to the community, providing subsidised rates to low-income households, water conservation education, and environmental clean-up efforts. For example, the company is cleaning up the New Pinheiro's River after years of neglect by repopulating the river with native algae and plants to restore the ecosystem's natural balance.

Climate Action: Energy Transition

The world needs to reduce its reliance on fossil fuels. This means turning to more renewable ways of producing energy such as wind, solar and hydro power; phasing out the use of internal combustion engines in favour of electric vehicles; substituting plastic packaging for recycled and/or paper-based materials, among other avenues.

Emerging and frontier economies are actively rising to the challenge with increasingly strong public policy commitments to the energy transition.²³ This is essential: resources required to power the global revolution in renewable energy and energy efficiency are concentrated in emerging and frontier markets.

Sustainable companies in emerging and frontier countries are also providing leadership in innovation in the energy transition, in areas such as infrastructure, manufacturing, freight, transportation, and energy generation, among others.

Case Study: Xpeng

- Market Cap: \$11.7bn
- ADTV: \$92m
- Country: China
- SDG 7: Affordable and Clean Energy
- Sustainable Revenues: 96.25%

The transition from internal combustion engines to electric vehicles (EVs) is key to decarbonising road transport, which accounts for 16% of global emissions.²⁴

Until the early 2000s, China's car industry was a powerhouse in manufacturing traditional internal-combustion cars, but there were no domestic brands that could compete with foreign makers. EV technology was introduced as a priority science research project in China's Five-Year Plan and, since then, EV development has been consistently prioritised in China's national economic planning.



The efforts have succeeded: China boasts the highest penetration in EVs as part of its auto fleet, with new energy vehicles ("NEV") comprising ~35% of the auto fleet in China, vs 8% in the US and 15% in Europe.²⁵ China leads the world in NEV adoption, with Chinese companies being some of the first in the world to achieve profitable EV production at scale.

From 2020 to 2022, the number of EVs sold annually in the country grew from 1.3 million to 6.8 million, with 2022 making the eighth consecutive year in which China was the world's largest market for EVs. For comparison, the US only sold about 800,000 Evs in 2022.²⁶ Over their entire life cycle – from production, use, disposal and end-of-life, new EVs are expected to have significantly lower impacts on the climate compared to conventional combustion engine vehicles.²⁷

Xpeng is a leading Chinese smart EV company that designs, develops, manufactures and markets EVs in China. It is also a leader in autonomous driving technology. The products primarily target the growing base of technology-savvy middle-class consumers in the mid-range to high-end segment in China's passenger vehicle market. The company sold over 120,000 EVs in 2022, accounting for about 2% of China's passenger NEV market. EVs delivered by Xpeng in 2022 are estimated to reduce carbon emissions by approximately 1.72 million tons over their entire life cycle, advancing green and low-carbon travel.²⁸

- ²³ Making-Mission-Possible-Full-Report.pdf (energy-transitions, org) p 54
- ²⁴ How did China come to dominate the world of electric cars? | MIT Technology Review
 ²⁵ Electric Vehicles – Analysis - IEA
- ²⁶ For example, Korea and China lead the supply of EV battery technology compared to the rest of the world. Source: Morgan Stanley and Redwheel estimates.
- ²⁷ Road transport: Reducing CO₂ emissions from vehicles (europa.eu)
- ²⁸ xpeng.com

A rising tide of capital in sustainable opportunities

Businesses that follow more sustainable practices are beginning to receive recognition for the value they create. The Global Impact Investing Network (GIIN) notes that "impact investors plan to step up their capital allocation to emerging markets and meeting the basic needs of communities in those regions over the next five years,"²⁹ due to "a growing track record of successful investments in emerging markets".

We are optimistic about increasing market focus on sustainable companies making positive impacts within emerging markets. As disciplined long-term investors, we seek to invest in profitable business models run by responsible stewards with strong mission-orientation and intentionality to contribute to progress towards the SDGs.



Key Information

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