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Scaling circular finance: No time to waste

Executive summary

In recent years there has been substantial growth of interest in the circular economy from leading businesses and governments, academics, the media and the public. Numerous studies and reports have demonstrated its potential, including to create 8 million jobs by 2030 (ILO, 2018), generate USD5 trillion in value by 2030 (Business and Sustainable Development Commission, 2017) and benefit all 17 of the UN Sustainable Development Goals (Schroeder, et al., 2018).

There are also many successful case examples of circular solutions around the world, with companies across sectors investing in R&D and partnerships for circular solutions. In recent years almost 80 governments have established circular economy roadmaps, including policies, regulations, and investment agendas (Chatham House, 2024).

However, the circular economy is often underestimated by being considered a concept only applicable to waste management and recycling. A more appropriate description is that it is a systems solution framework that decouples economic growth from the use of finite virgin raw materials, minimising the production of waste and pollution. It achieves these ends by extending the lifespan of products, keeping them in high-value use in the economy for longer, and designing products and services to have nature-positive and regenerative impact.

Adopting circular solutions improves the resilience and competitiveness of companies and economies by reducing their dependence on virgin raw materials – and therefore their exposure to related price volatility – and lowering their greenhouse gas (GHG) emissions and wider environmental footprints. Circularity reduces the impact of growth in population and per-capita consumption on the world's finite resources and is able to help address the 45% of global GHG emissions that energy transition solutions cannot tackle at scale (Ellen MacArthur Foundation, 2021).

The rationale for making the case for circularity as a climate solution is clear

- **Integrating circular solutions into decarbonisation strategies for hard-to-abate sectors such as steel, concrete, cement and plastics can reduce GHG emissions by more than 25% and lower abatement costs by 45% relative to only decarbonising the production of these materials (Agora Industrie, et al., 2024).**
- **Many circular solutions are ready for deployment at scale and deliver multiple benefits beyond carbon reduction, whereas this is not the case for proposed transition solutions such as hydrogen or carbon capture and storage.**
- **The introduction of circular solutions can reduce demand for energy, including renewable energy, by 20%. This lowers renewable energy-related investment requirements, raw material demand, and end of life challenges.**
- **Introducing circular solutions can increase the return on invested energy. Extending the life of products keeps the energy embodied in them in use for longer, reducing overall energy demand and carbon emissions. Reducing the need for mitigation releases capital that could be redeployed to further scale-up circular solutions.**
- **Successful circular strategies reduce the need for virgin natural resources, the extraction and processing of which accounts for 55% of global GHG emissions. Such strategies also benefit ecosystems, as 90% of land use related biodiversity loss is linked to resource extraction and processing (United Nations Environment Programme, 2024a).**

The circular economy is yet to become a fully mainstreamed agenda despite wide reporting of its economic rationale and the increasingly evident systemic risks posed by the linear economy. Using the crude measures currently available, the world remains mostly linear with material circularly hovering around 7% of total material throughput (Circle Economy, 2025). It's clear that while the concept of circularity is both economically compelling and brings numerous benefits, the transition faces several challenges, including factors such as:

- **Linear lock-in as some businesses see circularity presenting a revenue cannibalisation risk, and a risk of creating lower valued or stranded assets.**
- **Transition costs as developing a circular business model may require significant innovation and re-tooling which have associated investment costs.**
- **Policy and regulatory innovation is required to scale initiatives including Extended Producer Responsibility (EPR) funding models; stimulate appropriate cross border secondary material flows to improve aggregation and feedstock supply; and help develop economically viable markets for circularity to emerge.**

The fact that circularity is not being adopted at pace globally is perhaps not surprising, given that the concept has only gained global prominence over the past 10 years. Circularity may well follow a development path similar to the renewable energy sector, which in its early years struggled to compete commercially with the incumbent fossil-fuel based energy sector. However, renewable energy investments are now over USD2 trillion per annum, 80% higher than fossil-fuel based power investments (BloombergNEF, 2025).

The circular economy is especially relevant to developing countries, as without it over half of the targets associated with the UN's Sustainable Development Goals cannot be achieved (Schroeder, et al., 2018). By adopting circular policies, developing countries can improve the resilience of their economies. Key areas of focus include infrastructure investments associated with waste and recycling as many developing markets lack basic waste management systems. This is both essential for post-use materials recovery and for prevention of pollution, particularly in the case of plastics and plastic packaging. Other important development areas are water supply and adoption of circular principles in the food and agriculture sectors. Circularity strategies for developed markets, such as in Europe and in some countries in Asia such as Singapore, will be different as these countries already have well established waste management and recycling systems. The focus in these countries will be on expanding product life extension solutions and improving recycling and secondary material flow economics.

The risks resulting from failing to transition to a circular economy are substantial. In the business-as-usual scenario, extraction of raw materials will have to be 60% higher in 2060 compared to 2020 (UNEP, 2024), while total waste generated would likely increase by 80%, costing the global economy USD417 billion per year by 2050 (World Bank, 2024). The annual social cost in terms of health impact of plastics waste alone is estimated at over USD600 billion (Minderoo Foundation, 2022).

Four levers could help close the USD6.5 trillion circular funding gap

The full report from the Circular Economy Innovation Hub at Standard Chartered, **Scaling circular finance: No time to waste,** focuses on the challenge of mobilising finance to scale the circular economy. We outline four key actions critical for mobilising the capital required to scale upstream circular material solutions.

Circular investment requirements

For the assessed sectors we estimate a global circular investment requirement by 2035 to be in the range of USD7-14 trillion depending on the assumptions used by sector and the targets associated with the adopted circular strategies. Eliminating uncontrolled waste and increasing waste recycling rates to between 50-70% globally by 2050 alone requires USD2.6 trillion on our modelling. We have excluded some more complex sectors such as transport from our estimates suggesting that the overall circular investment requirement is higher than the top end of our current range. By comparison, net zero-implied energy transition investment requirements until 2035 may be more than USD88 trillion according to Bloomberg (BloombergNEF, 2025)

The funding gap

To determine the circular funding gap, we have estimated the current baseline of investment exposure to the circular economy and the annual circular investments made into the assessed sectors. Estimating financial exposure to the circular economy is challenging as there are currently no globally-accepted circular finance reporting standards. We have collated existing published estimates and applied conservative modelling assumptions to develop an initial perspective on major funding sources. This shows for corporate on-balance sheet lending a figure of around USD20 billion, and for corporate bonds and regional development banks an additional USD165 billion. If including additional non-bank investment by asset managers, and other private finance, this brings total existing financial investment in the circular economy to around USD270 billion. These figures compare to the USD334 billion estimate produced by the Ellen MacArthur Foundation in relation to named finance and investment mobilised and dedicated to circular economy solutions and infrastructure globally since 2019 (Ellen MacArthur Foundation, 2024). As for investments into circular solutions for the assessed sectors, we estimate that these could reach USD563 billion until 2035. Subtracting this from our previous estimate for total investment requirements suggests a circular funding gap of at least USD6.5 trillion for the period until 2035.

To help close this gap we propose a number of financing approaches, including the use of green and sustainability-linked bonds and loans, and a greater deployment of other innovative financial solutions. These include integrating public with private funding, blended finance, engagement from larger corporates into circular investment projects across their supply chains and embedding insurance or guarantee features into circular investment vehicles. All these solutions lower the perceived risk profile of circular projects, which in combination with policy support of off-take agreements and longer-term demand, is likely to help mobilise capital.

Governments and corporates are deploying significant effort and resources towards the introduction of policies, regulations and strategies to reduce their net emission profiles. However, other than in a few leading cases, most governments and corporates currently fail to recognise the potential of circular solutions as climate or nature solutions.

We argue that part of climate mitigation finance should be directed towards accelerating the development of a circular economy as this is likely to yield GHG emissions saving results quickly. In addition, we believe that developing countries should explore the possibility of creating carbon credits based on the level of GHG emissions avoided through the adoption of circular solutions. The report asserts that to successfully deploy all these options and increase investments in circular solutions requires the following four levers to be adopted by relevant stakeholders:

1. Recognise that the circular economy is fundamental to delivering climate and nature targets

Greater recognition of the circular economy as a climate and nature-related solution is important as it will raise the profile of circular solutions and facilitate mobilisation of capital towards them. This recognition, alongside showing how circular strategies directly reduce GHG emissions, would bring the circular economy into the mainstream climate agenda, facilitating access to climate finance flows (e.g. green bonds, sustainability-linked loans, climate funds).

The report makes the case for strengthening sustainable finance business cases by linking circular practices to measurable GHG emission reductions. This allows companies and investors to internalise avoided carbon costs (e.g. through carbon pricing, emissions trading, or corporate net-zero targets) which would make circular investments more financially attractive by showing more clearly their direct contribution to decarbonisation commitments. The approach could also enable a clearer path for policy support and blended finance support, which is particularly relevant to the funding requirements of waste and recycling infrastructure in developing markets.

Many governments and development banks are increasingly deploying blended finance solutions to accelerate climate—related investment. Establishing circular economy as a recognised climate mitigation and adaptation strategy may expand the scope for its eligibility for blended finance, concessional loans, and public–private partnerships, reduce risk for private investors, and encourage larger capital flows into circular ventures.

2. Agree on circular definitions, principles, measurement, and reporting

One of the key challenges to a wider adoption of circular solutions and the mobilisation of circular capital is that there is currently no universal agreement on the scope and definition of the circular economy; how to measure circularity; and what the reporting standards for it are. As a result, it is difficult to assess the rate of circularity of an economy or organisation or understand capital allocation towards circular solutions.

The report shows that progress around circular principles and reporting standards is being made, but more needs to happen. Mandatory, sector-based approaches and standards would help accelerate circular economy adoption.

3. Integrate the circular economy into finance risk models

Engagement by the financial sector with the circular economy has been low, and this needs to change if circular capital is to scale more quickly. Increasing engagement requires developing tools that estimate corporate exposure to the risks and opportunities of circular and non-circular activities and integrating these estimates into risk and lending models used by financial institutions.

The report highlights two recently published proposals that may accelerate engagement from the financial sector: the circular economy finance guidelines from the International Finance Corporation; and the circular risk scorecard methodology developed by the Kopgroep Circulair Financieren.

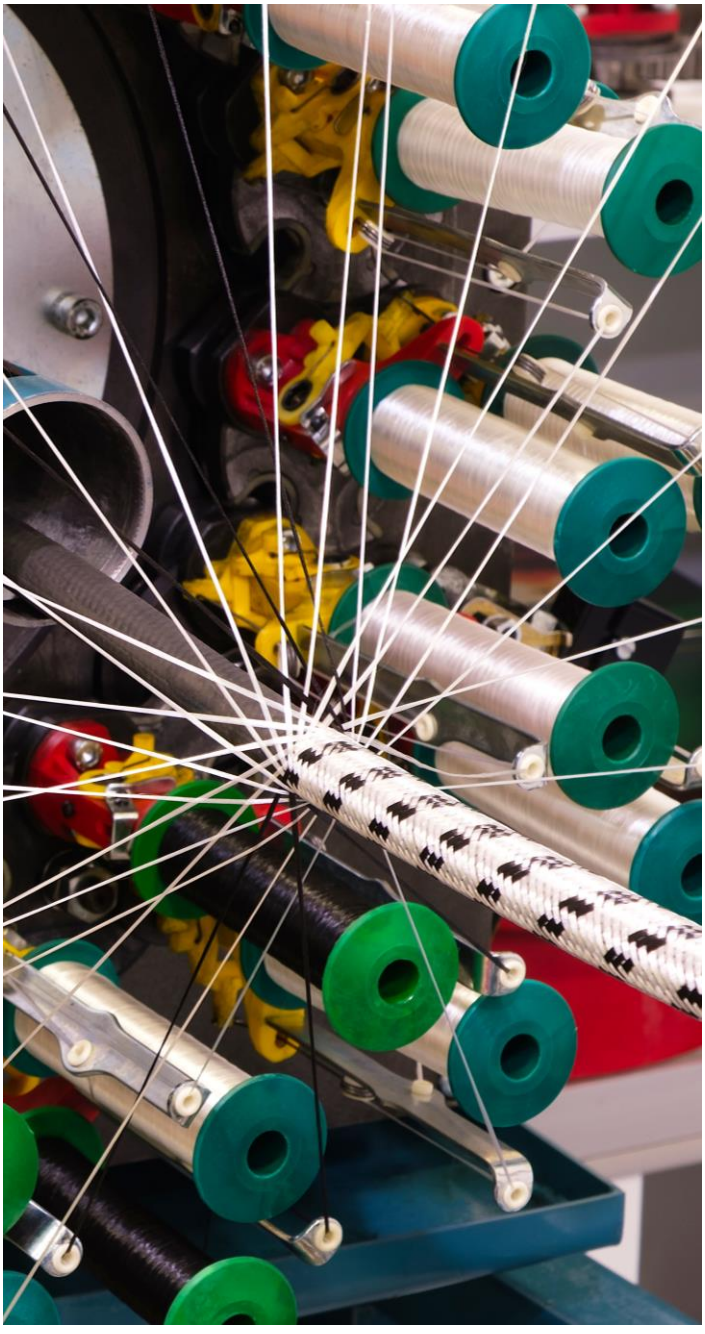
4. Drive for a harmonised international regulatory and policy landscape

Analysis across different countries suggest that regulation is necessary to drive circular adoption rates (Sanz-Torro, et al., 2025). However, circular economy legislation often fails to take a harmonised, sector-based, cross-border approach. Such an approach is important for accelerating adoption as it reduces complexity, costs and uncertainty for corporates and investors; and it improves economies of scale and helps develop cross border trade in secondary materials, which is often essential for their market viability. This approach could increase engagement with circularity from corporates across the value chain which helps to attract the capital necessary to develop low-cost circular solutions.

European Commission policy clearly demonstrates an intention to harmonise policy to enable the single market to achieve viable secondary material markets. This is apparent in the Ecodesign for Sustainable Products Regulation (ESPR) and the associated approach for the development of Product Passports. The Commission is also actively engaged in international trade and collaboration missions with numerous countries across Asia, Africa, Latin America and the Caribbean which in part aim to inform and influence circular economy policy harmonisation.

The need for policy harmonisation has been clearly highlighted in the negotiations to establish a Global Plastics Treaty. While at the time of writing, the United Nations Intergovernmental Negotiation Committee process has failed to deliver an agreed treaty, over 300 members of the Business Coalition For a Global Plastics Treaty have called for globally harmonised regulations that "businesses need and the majority of countries want" (Business coalition for a global plastics treaty, 2025).

Circular policies need to recognise any social implications that circular adoption may have. This is especially relevant for the Global South as work from the ILO shows that adopting circular solutions globally may cause up to five million job losses across APAC and up to one million across Africa (ILO, 2018). The adoption of circular economy solutions may also increase pressure on workers in sectors in the developing world that have a high share of informal labour.



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