Intesa Sanpaolo Circular Economy Plafond: How to Support Companies’ Transformation*

Anna Monticelli**

Abstract

The present development model, born with the industrial revolution, has been extremely successful in supporting growth, innovation, wealth for hundreds of years. But not for all the Countries and not for all the people, in an equal way. A new paradigm is envisaged to transform the development model through an economy that follows the same principles used by the Nature and that aims to reconnect business and society.

A Circular Economy, regenerative by design and committed to design out waste and pollution, through innovation in materials, in production processes and moreover in business models, is a big opportunity for companies and financial institutions, if they transform the way they’re doing business. Intesa Sanpaolo is committed in re-thinking financial instruments and processes to support companies and accelerate a systemic transformation, within the limits of our Planet, focusing on thrive for all more than on growth for someone.

Keywords: Circular Economy; Credit Facility; Credit Risk; Circular Criteria; Sector and Metrics

1. The Role of Intesa Sanpaolo as an Innovative and Sustainable Player

All the financial institutions have a significant impact on the social and environmental context in which they carry out their business and should be committed at promoting a correct and responsible allocation of resources.

Intesa Sanpaolo, choosing to act not only on the basis of profit, but also with the aim of creating long-term value for the Bank, its employees, customers, community and the environment, is committed in creating a strong and fruitful bridge between business and society.

Therefore, also supported by a solid vision of innovation, it promotes a development model aimed at redirecting capital flows towards sustainable investments to balance different interests such as the preservation of the natural environment, health, work, the well-being of the community as a whole and the safeguarding of the system of social relations. Intesa Sanpaolo wants to be a responsible financial intermediary that generates collective value knowing that innovation, development of new products and services and corporate responsibility

* Invited article
** Head Circular Economy Desk, Intesa Sanpaolo Innovation (anna.monticelli@intesasanpaolo.com)
can contribute to reducing the impact on society of phenomena such as climate change and social inequality.

Globalisation has supported the growth of emerging economies, reducing the income gap with developed economies, but has also increased social inequality within countries almost everywhere; Intesa Sanpaolo is conscious that economic inequality and disparity of opportunities can no longer be ignored, not only for ethical reasons, but also to provide a sustainable future for the next generations and to ensure social stability in the present.

1.1 Circular Economy: A New Transformative Paradigm

We are aware that the linear economy (take-make-dispose) granted us a terrific growth during the last couple of centuries but failed to take into account the negative impacts generated on the environment and on society. This is because the linear model could only efficiently work in a “cow-boy economy”, where available resources seem unlimited compared to our needs.

However – due to industrialisation, globalisation and increase in global population – we eventually found out that our world is better described as “astronaut economy”. We can only count on the amount of resources that our Planet can provide us and most of them are not renewable.

Resources are actually finite and this evidence limits the potential growth of the traditional “linear” system which, as a matter of fact, has critically slowed down.

We must remember that resource use projections, in a linear model, foresee nearly a double by 2060 (OECD). Unfortunately, current economic practices do not preserve the value of resources, products are not designed to last long or to be easily repaired and the exploitation of natural resources to drive economic activity leads to more than 11bn tons of waste annually worldwide and over 50% of Green House Gas emissions are related to virgin materials management activities (extraction, manufacturing, transportation and disposal).

As a result, in addition to severe environmental risks, there are a variety of business risks that arise from adhering to a linear economy mindset, connected to future resource shortages and associated impacts on price volatility, supply continuity, market dynamics and consumer behaviors.

Circular economy, on the other hand, decouples economic growth from the consumption of finite natural resources. Re-designing products and business models in a circular way will allow to keep growing in a sustainable way, both environmentally and economically.

While we consider Circular Economy as an innovation trend, the concept has its foundation in the 1960s. Preston (2012) claims that the notion of a CE has its roots in industrial ecology, Ghisellini et al. (2016) and Murray (2017) declare that the term itself was used for the first time in the literature in the 1980s by environmental economists Pearce and Turner (1989) when they explained the change of the traditional open-ended economic system to a circular economic system as a consequence of the laws of thermodynamics (Georgescu-Roegen 1971). However, as cited before, in the work of Boulding (1966) we can already find most of the principles and concepts connected to Circular Economy.

As stated more recently by the Ellen MacArthur Foundation, Circular Economy is a new economic paradigm underpinned by the transition towards renewable energy.
sources. Circular business models follow three simple principles: design out waste and pollution, keep products and materials in use and regenerate natural systems.

The Circular Economy not only can mitigate linear risks but can also create opportunities in terms of resource efficiency and profitability gains, driving a long lasting and future proof change. The transition to a circular economy will require radical changes to the way we produce and consume, transformation of business models and strategies, driven by innovation, that in turn would require substantial financial resources.

Therefore, re-thinking financial instruments to support the re-design of the industrial ecosystem is a big part of the game, not a consequence of the transformation but one of the drivers.

1.2 A Strategic Choice

Since 2015, Intesa Sanpaolo is the first Financial Services Strategic Partner of the Ellen MacArthur Foundation, undoubtedly the most relevant and effective organization at global level working on Circular Economy.

Taking advantage of its own competitive positioning and of the Foundation’s expertise and wide network, the Bank intends to play a strategic role in supporting emerging entrepreneurs and innovators in the co-design of new business models that are transformative and at the same time bankable, creating greater risk-adjusted returns.

Rethinking financial instruments is therefore a key factor to support the re-design of the industrial ecosystem and the role of Intesa Sanpaolo Innovation Center, a hundred per cent owned company of Intesa Sanpaolo Group, is precisely to facilitate this re-thinking process, working closely with internal and external stakeholders of the Group. Financial support and innovation promotion from key stakeholders are clearly key drivers of the transformation.

Through its 2018-2021 Business Plan, Intesa Sanpaolo has decided to leave a positive mark on the society and on the economic system, becoming a point of reference in funding projects with innovative social and environmental aspects and particularly with a specific focus on Circular Economy and a strategic objective to financially support companies’ transformation.

1.3 The Actors Involved

A circular economy transition works only if the transformation happens at a systemic level and all the main actors are correctly and actively involved. Businesses and policymakers have a leading role in enabling this transition.

As stated by Carlo Messina, CEO of Intesa Sanpaolo, in an interview published by The Banker in March 2019, Circular Economy is an opportunity for banks to de-risk their portfolios, investing in the business models of the future:

□ «Circular Economy redefines the approach to value creation. It is a disruption to the business model, that Intesa Sanpaolo is supporting and more banks should be doing the same. The financial sector, especially from a de-risking perspective, should play a
crucial role in unlocking opportunities while supporting clients in reorienting their business strategies.»

Companies can have a positive effect through their business decisions, for example on material inputs, design and production methods, business model choices, reverse logistics systems, capacity building and job creation opportunities.

These strategies determine the nature and volume of what is put on the market and how products, materials and nutrients can be kept in the system as long as possible.

Policymakers on the other side have the responsibility of creating conditions, regulations and initiatives that promote common circular targets, and of discouraging and, where appropriate, banning linear practices to create a new level playing field.

European Commissioner Frans Timmermans said in an open letter in seven European newspapers on April 16th 2020:

□ «We must not return to a carbon spewing economy. The European recovery plan for the economy must focus on making the EU economy greener, more circular, more sustainable and is connected to job-growth. How do we get there? By replacing the old, polluting infrastructure with a modern, clean and efficient alternative in all sectors; water, energy, construction, mobility, agriculture and industrial processes, to name a few. This will allow us to create many more jobs and grow our GDP much more than in the old way.»

In economic terms, authoritative studies identify the opportunity of savings for the supply of resources and raw materials in Europe of approximately EUR 1.8 trillion and the potential for securing world GDP in USD 4.5 trillion by 2030.

In the case of the food sector, for example, growing food regeneratively and sourcing locally where appropriate, designing and marketing healthy food products, and making the most of food would generate annual benefits worth USD 2.7 trillion by 2050 globally.

The overall benefit to the world economy if the fashion sector is committed to the circular economy principles is estimated to be worth USD 192 billion in 2030, while in the case of plastic packaging, the economic benefit in transitioning to reusable plastic packaging is estimated to be a USD 10+ billion innovation opportunity.

The financial sector, supporting the real economy and the huge investments required, plays a decisive role in the transition from a linear model to a circular one, thus unlocking opportunities for all the stakeholders involved.

2. The Circular Economy (CE) Plafond

Circular business models could create value through resource productivity and related cost savings (e.g. remanufacturing), or the development of new markets, hence generating additional revenue streams (e.g. subscription models), or the substitution of critical materials in input with more sustainable and innovative ones.

To support these kind of activities, Circular Economy was listed as a key strategic pillar in Intesa Sanpaolo 2018-2021 Business Plan and the Bank decided to create a
Circular Economy Plafond, a EUR 5 billion credit facility dedicated to the most innovative companies and projects.

Through this project, Intesa Sanpaolo is seizing a strategic opportunity to become an innovative financial promoter for the circular economy, redefining traditional financial tools to support the transition to a new model for economic development, which is sustainable over time.

In September 2018, Intesa Sanpaolo launched its CE Plafond, dedicated to the most innovative companies or projects in the Circular Economy field across all Italian and foreign markets. Access to CE Plafond is regulated by both ordinary credit procedures and compliance with a set of dedicated eligibility criteria.

2.1 The Eligibility Criteria as a result of a Common Effort

Standardized circular metrics will allow financial institutions to recognize circular assets and properly allocate them in their portfolios, thus helping in decision making for investments or financing activities.

But while ESG metrics have a consolidated track record, even if they are not completely harmonized yet, circular metrics are still being studied by companies and organizations. Many lists of KPIs and metrics have been proposed and are effectively used to analyze and evaluate projects and products but none of them represent an established framework that could be considered sharable and reliable.

For this reason, access to the Plafond is evaluated against a set of five eligibility criteria built on purpose, a Circular Economy framework developed by Intesa Sanpaolo Innovation Center in partnership with the Ellen MacArthur Foundation.

These criteria are based on 5 cornerstones of the circular economy, i.e. the extension of the useful life of products or the cycles of use of goods, the use of renewable energies and of renewable or recycled products within the production processes, the optimization of the effectiveness of resource consumption (also along the value chain), and technologies capable of enabling circular economy models (Table 1). We have also developed a set of specific and measurable indicators, to effectively evaluate, even after years, the impact on companies’ businesses of the investments financed.

These criteria are slightly different but in line with those used by the European Investment Bank for the selection of its circular loans. They are also compliant with the EU Sustainable Finance Taxonomy that will become effective since 2022 and with the EU Circular Finance Taxonomy, recently published by the Finance Expert Group of the European Commission.
Table 1: Eligibility Criteria to Be Followed

| Circular Economy Eligible categories | Further details | Benefits |
|--------------------------------------|-----------------|---------|
| 1 - Solutions that extend the product-life or cycles of use of goods and/or materials | ▪ Applying modular design or design for disassembly<br>▪ Take-back schemes and redeploying products<br>▪ (reverse logistic)<br>▪ Reuse, repair and/or regeneration/refurbishment Servitization (pay-per-use) and models aiming at sharing goods (sharing economy) | Solutions that extend the product life or cycles of use of goods allow to maintain the inner value of products and components at the highest possible level |
| 2 - Production processes fuelled by and/or products made of renewable or recycled resources | ▪ Products that substitute critical materials with biological or bio-based materials<br>▪ Processes fuelled by energy from solar, wind or conversion of biomass to energy | Production processes powered by renewable energy and products made of renewable or recycled resources allow to decouple production processes from fossil fuels and fossil-based raw materials |
| 3 - Products and/or services that significantly increase effectiveness and efficiency of the resource consumption, within the company or along its supply chain | ▪ Applying principles of industrial symbiosis and realizing an integrated supply chain that makes waste streams into feedstock<br>▪ Closing loops and apply circular economy and systemic design principles | Products and services that significantly increase effectiveness and efficiency of the resource consumption enable a relevant saving of critical resources and are restorative and regenerative of the natural capital |
| 4 - Design and/or manufacture products that can be fully recycled or composted within an efficient framework of collection, separation and recycling after use | ▪ Compostable products<br>▪ Recyclable products | Design and manufacture products that can be fully recycled or composted allow to significantly reduce waste by re-using effectively products, components and materials |
| 5 - Innovative technologies to enable circular business models | ▪ Internet of Things to empower traceability<br>▪ (reverse-logistic) and predictive maintenance<br>▪ Additive manufacturing/3D printing to increase easy-to-repair degree and materials efficiency<br>▪ Big Data analytics, Artificial Intelligence, Cloud Computing, Digital for dematerialization and marketplaces for secondary raw materials<br>▪ Blockchain technology for certified traceability of the supply chain, and origin derivation | Innovative technologies enable new business models and services, enhancing all the positive impacts connected to the Circular Economy, including the access to assets and resources for a wider target of consumers |
2.2 The Operative Process and the Internal/External Engagement

With the Circular Economy Plafond, Intesa Sanpaolo pursues the strategic objective of guaranteeing access to credit, at the best possible conditions, for companies that want to undertake innovative projects based on the circular regenerative model. This is a Group’s target and consequently all the activities connected to the setup phase and the roll out of the project involved many different internal structures and departments. It has been a team work, where different roles and distinctive competences joined forces to reach a common strategic objective.

At the end of 2018, after 6 months of intense predisposition activity, the Plafond was ready to be launched. An internal communication campaign was prepared and disseminated through the Bank’s channels and billboards posted in the branches recalled the principles and advantages of circular economy as well as the availability of a specific credit facility. In addition, an online course was created for all Bank’s employees to align them on the topic and clarify the characteristics of the financing tool. A widespread promotion activity of the circular economy was also made to customers, through dedicated meetings inside the branches and descriptive pages on the Bank’s web site.

Now that the Plafond is fully operational, the process follows specific steps:

– the first contact with the customer takes place in the branch or at the customer’s premise, with a first analysis of the project or initiative that is about to start and has to be financed;
– the relationship manager sends a summary of the information collected to the Circular Economy Desk (an Intesa Sanpaolo Innovation Center’s dedicated structure) for a preliminary study;
– most of the times a further meeting with the client is necessary to better understand the project’s objectives and to jointly define the KPIs that will be used to measure the actual impact of the project and at the same time the benefit created by the loan;
– once all the terms of the loan and the underlying project have been correctly defined, if the Circular Economy Desk assesses that it falls within the perimeter of the CE criteria, it provides a positive opinion and informs the network that the loan is eligible for the Plafond.

Since then, the process starts to follow the usual rules, with the credit analysis and all the other evaluations carried out from the competent departments.

All information relating to the loan are collected and reported in a dedicated tool shared by various structures. When the loan is disbursed, this information is also added. In this way it is possible to keep all the data of the CE portfolio updated and available for further analysis and insights.

2.3 Sectors, Metrics and Key Performance Indicators

Having such a well-defined and segregated portfolio at our disposal allows us to make useful insights and assessments. To facilitate these analyzes we decided to identify eight macro sectors within which the funded projects fall and specific KPIs for each sector.

The eight sectors are:

– Agriculture, Food & Beverage;
The sectors were identified thanks to a specific framework developed by Intesa Sanpaolo Innovation Center and the Ellen MacArthur Foundation in 2019 and for each of them we defined scope and KPIs. This facilitates, upstream, the recognition of circular projects by our relationship managers and downstream the correct clustering and subsequent evaluation.

We have also connected significant KPIs to the fundamental principles of the circular economy and some examples are detailed below.

Table 2: Measurement Indicators

| CIRCULAR ECONOMY PRINCIPLES                      | MEASUREMENT INDICATORS         | UNITS      |
|-------------------------------------------------|--------------------------------|------------|
| Design out waste and pollution                  | Replaced critical materials    | tons/year  |
|                                                | CO₂ reduction or recovery      | tons/year  |
|                                                | Technologies installed for circular models | units |
| Keep products and materials in use              | Recovered or recycled material | tons/year  |
|                                                | Reconditioned products at the end of use | tons/year |
|                                                | CO₂ avoided due to product life extension | tons/year |
| Regenerate natural capital                      | Recovered water                | cubic meters |
|                                                | Recovered soil                 | square meters |
|                                                | Compost product                | tons/year   |
| Utilise renewable energy                        | Renewable energy produced     | MWh/year    |

Through these indicators we will be able to evaluate not only the impact of the companies’ investments financed but also, consolidating the data, to report the overall impact of the CE Plafond.

While we have already disbursed approximately a 25% of the available funds, we are currently in the process of evaluating numerous possible investments, focused on specific projects related to the implementation of business models that contribute to increase the level of circularity of the companies that undertake this path. Corporations belonging to different industrial chains are involved (textile, GDO, energy and multiutility, automotive, metalworking, consumer electronics, etc.) and below we have a breakdown of sectors related to loans already disbursed.
As showed in the graph, some sectors are much more represented than other, depending moreover on the presence of some big loans that weight a lot on the total disbursed. In general, the total number of projects financed is the result of many small to medium loans granted to SMEs.

The idea behind the definition of the sectors was to be able to include in the same sector projects involving multiple actors in the same supply chain or in an enlarged one. Considering the results so far, we notice that some of the sectors less represented are those that in theory should benefit more from a circular transition, like Fashion and Textile, Agriculture, Food and Beverages and Chemicals and Materials. We envisage that an intensification of the engagement of companies and of the other significant stakeholders, like representative associations, Institutions and policy makers, through the sharing of good practices and solid and promising data, will create a more favorable context and a greater interest towards circular investments.

Some examples of real investments financed through the CE Plafond are detailed below.

Fashion company with a long-lasting commitment to having a positive societal and environmental impact. The company has recently built two plants to produce hydroelectric energy and it will soon build a third one. Furthermore, several investments are ongoing to recover textile byproducts and to re-insert them in the production cycle, both for self-use and re-selling it to other companies.

Construction of a plant to produce biomethane from organic waste. The company will also produce compost as a byproduct, to be used in agriculture, and it will recover CO2 from the transformation process.

The company is going to build its new ships with circular principles and commits to increase its waste recovery activities, to reduce food waste (also thanks to an innovative system to digitalize kitchens) and to purify wastewater for self-consumption on board.
Support to the opening of new stores and restructuring of existing ones with Circular Economy principles. The company will utilise only renewable energy to power its facilities. Additionally, it will significantly reduce its overall consumption of plastics and it commits to remove single-use plastics from shelves one year in advance from legal requirements.

Set of circular investments aimed to reduce CO2 emissions of the company, e.g. in plastic recycling (including upcycling plastic into high value polymers) and in utilisation of biological components as feedstock.

Any project has specific targets and its impacts affect different business areas. The transformative effect is more evident in some cases, while in other situations a marginal improvement is realized in the short-term but we can already glimpse future promising developments.

What is worth investing in from both a promotional and financial support point of view is the supply chain perspective. The circular economy transformation needs a systemic approach and it is essential to take advantage of the opportunity to involve not only a single company but its entire supply chain, on common and shared improvement objectives.

This is also our goal as a bank and we believe that it can contribute, on the one hand, to increasing the speed and impact of change and innovation and, on the other hand, to help mitigate the risks of inconsistent and not synergistic business activities.

Managing risk is a core part of the investment process for financial institutions, and a key factor to their stability and long-term growth. However, the exposure to the effects of linear economic business practices generates unexpected and underweighted risks that could have a substantial effect on the financial industry and the global economy in the future through unanticipated losses.

We expect that the analysis of the portfolio of loans disbursed through the CE Plafond will bring data and evidence of the actual de-risking effect of the circular economy and will provide a solid basis for discussion with experts and regulators for updating risk models.

2. Conclusions

An innovative approach and a clear vision of the opportunities at stake are the driver for Intesa Sanpaolo's strategic positioning in the circular economy context.

It is necessary to pursue the centrality of the circular economy as a driver of innovation and transformation of enterprises and of the economic context in general. Attention to this issue is even more relevant in the current situation of restart following the serious systemic crisis due to Covid 19, as well as in the framework of the Agenda 2030 of the Italian Government and of the Green Deal at European level. Therefore, the support to the transformation of companies and supply chains remains among the Bank's priority objectives, also taking into account the de-risking potential linked to circular business models.

Investing in a new sustainable and innovative development model can be the best driver for a stable, organic and equitable growth for all.
Bibliography

Boulding K. (1966). *The Economics of the Coming Spaceship Earth*, New York.

Brondoni, S. M., & Mosca, F. (2017). Ouverture de ‘Integrated Corporate Social Responsibility’. *Symphonya. Emerging Issues in Management* (symphonya.unimib.it), (1), 1-6.

http://dx.doi.org/10.4468/2017.1.01ouverture

Brondoni S. M. (2018). Planned Obsolescence, Total Quality, Zero Defects and Global Competition. *Symphonya. Emerging Issues in Management* (symphonya.unimib.it), (2), 8-20.

http://dx.doi.org/10.4468/2018.2.02brondoni

Brondoni, S. M., Bosetti, L., & Civera, C. (2019). Ouverture de ‘CSR and Multi-Stakeholder Management’. *Symphonya. Emerging Issues in Management* (symphonya.unicusano.it), (1), 1-15.

http://dx.doi.org/10.4468/2019.1.01ouverture

Cassano, R. (2019). Corporate Global Responsibility and Reputation Risk Management. *Symphonya. Emerging Issues in Management* (symphonya.unicusano.it), (1), 129-142.

http://dx.doi.org/10.4468/2019.1.10cassano

Circle Economy, PGGM, KPMG, EBRD, & WBCSD, (2018). *Linear Risks*.

Ellen MacArthur Foundation (2015). *Towards a Circular Economy: Business Rationale for an Accelerated Transition*.

Ellen MacArthur Foundation, (2015). *Circularity Indicators – An Approach to Measure Circularity. Methodology & Project Overview*.

Ellen MacArthur Foundation (2019). *Cities and Circular Economy for Food*.

Ellen MacArthur Foundation (2019). *Reuse: Rethinking Packaging*.

European Commission (2020). *Categorisation System for the Circular Economy*.

European Commission (2020). *Sustainable Finance: TEG Final Report on the EU Taxonomy*.

Freeman, R.E. & Dmytriyev, S. (2017). Corporate Social Responsibility and Stakeholder Theory: Learning From Each Other. *Symphonya. Emerging Issues in Management* (symphonya.unimib.it), (2), 7-15.

http://dx.doi.org/10.4468/2017.1.02freeman.dmytriyev

Georgescu-Roegen, N. (1971). *The Entropy Law and the Economic Process*. Harvard University Press.

Ghisellini, P., Cialani, C., & Ulgiati, S. (2016). A Review on Circular Economy: The Expected Transition to a Balanced Interplay of Environmental and Economic Systems. *Journal of Cleaner Production*, (114), 11-32.

http://dx.doi.org/10.1016/j.jclepro.2015.09.007

Global Fashion Agenda, & Boston Consulting Group (2017). *Pulse of the Fashion Industry*.

Huber, J. (2000). Towards Industrial Ecology: Sustainable Development as a Concept of Ecological Modernization. *Journal of Environmental Policy and Planning*, October-December, 2(4), 269-285.

Kirchherr, J., Reike, D., & Hekkert, M. (2017). Conceptualizing the Circular Economy: An Analysis of 114 Definitions. *Conservation and Recycling*, (127), 221-232.

https://doi.org/10.1016/j.resconrec.2017.09.005

International Resource Panel (2017). *Resource Efficiency: Potential and Economic Implications*.

Lambin, J. J. (2009). Capitalism and Sustainable Development. *Symphonya. Emerging Issues in Management* (symphonya.unimib.it), (2), 3-9.

http://dx.doi.org/10.4468/2009.2.02lambin

Murray A., Skene K., & Haynes K. (2017). The Circular Economy: An Interdisciplinary Exploration of the Concept and Application in a Global Context. *Journal of Business Ethics*, (140), 369-380.

http://dx.doi.org/10.1007/s10551-015-2693-2

OECD (2019). *Global Material Resources Outlook to 2060: Economic Drivers and Environmental Consequences*.
Pearce, D. W., & Turner, R. K. (1990). The Ethical Foundations of Sustainable Economic Development. Discussion Paper Series. London Environmental Economics Centre.

Preston, F. (2012). A Global Redesign? Shaping the Circular Economy, Energy, Environment and Resource Governance.

Raworth, K. (2018). Doughnut Economics: Seven Ways to Think Like a 21st-Century Economist, Cornerstone.

Salvioni, D. M., & Astori, R. (2013). Sustainable Development and Global Responsibility in Corporate Governance. Symphonya. Emerging Issues in Management (symphonya.unimib.it), (1), 28-52.

Stahel, W. (1997). The Performance Economy and Philosophical Transactions, Royal Society.

WEF, PACE (2019). A New Circular Vision for Electronics: Time for a Global Reboot.