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January 2020

#03

Creating Sustainable Value

Understanding the markets

Should the financial markets worry about social inequalities ?

Investing MedinCell, a humanistic pharma

Engaging in dialogues 2020, the year of biodiversity

Measuring Impact of our investments

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Investing in sustainability

An affiliate of: NATIXIS INVESTMENT MANAGERS

After the progress made in 2019, 2020 could be a pivotal year for sustainable finance

Don't let it go!

On 28 November 2019, the European Parliament took a resolution on "the climate and environment emergency". And with this, one more year comes to its end, while one more year begins... Like a pendulum movement, stubbornly ticking back and forth, this movement reminds us how important it is to speed up toward a just transition to a carbon-neutral world. In this context, the year 2019 has brought us its share of good and bad news, as it is so often the case.

There are two types of bad news.

First, an observation: we enter a period of climate suffering. The extreme events follow one another, the latest erasing the previous one from our mind. The end of this year is marked by a dramatic situation in Australia where temperatures in certain locations rise above 50°C, and out-of-control forest fires make the air impossible to breathe in Sydney. Unfortunately, this is only the visible part of the situation, which gives us a sense of what will happen to our climate in some decades if we do nothing. The other part of the problem is somewhat less visible, and we need scientists to describe the situation and to enlighten us. To this end, the global assessment report from the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), released on 6 May 2019, confirmed the nature's dangerous decline around the world. Mass extinction is already under way: one million animal and plant species are now threatened with extinction.

The second one is about our capacity to act. Regarding the international action, the year 2019 was not particularly positive: the United States withdrawal from the Paris Agreement is now effective. The election of Bolsonaro in Brazil has put upward pressure on the primary Amazon forest. Finally, the UN Climate Change COP 25 concluded with minimum agreements reached, which is far from the level of what is at stake.

To find signs of hope, we need to look at Europe. Old and tired as it may seems, our continent still shows the way. With Christine Lagarde just appointed as head of the European Central Bank, who, in her speech addressed to the European Parliament, declares that the Central Bank should put the climate issues at the heart of its monetary policy; with Mark Carney and François Villeroy de Galhau who engage the Bank of England and the Bank of France on the road to climate risk stress tests for banks;

with the European Union which resolutely progresses toward the implementation of the action plan for sustainable finance, by creating a taxonomy of green assets and demanding for more transparency from financial players, and by developing low-carbon benchmarks; with the European Investment Bank which takes a historical decision to end financing fossil fuels. At last, with the new Commission President who launches an ambitious "EU Green Deal": yes, obviously, Europe shows the way.

The positive signs also come from private players. The economic world has begun to change, the financial world is following suit. The carbon-intensive world is certainly not going to disappear, and inequalities will not be removed as if by magic. We are falling short. Yet, there are signals we should hold into to make them tipping points. In a statement made last summer, the Business Roundtable, a group of 250 CEOs of large US companies, announced that no longer would they prioritize shareholder value, but that their companies, by embracing sustainable practices across their businesses, should support the communities in which they work and protect the environment. This is a small revolution. In the same vein, last July, during the G7 Finance in Chantilly (north of Paris), Bruno Le Maire, the French Minister of the Economy, expressed an ambitious goal of "rebuilding capitalism". That is, indeed, one of the keys for the needed transition to which we all aspire: transforming the system, building a capitalism for all stakeholders.

What can we expect in 2020? If there is no hope arising from international negotiations, be it in Kunming on biodiversity in September, or in Glasgow on climate in November, we must continue to tirelessly carry out the economic and financial transformation. Every day, we see that investors' awareness is growing, as is the call for environmental and social impacts. Several risks are present on this path: a spirit of resignation first; the false belief that everything must come from states, regulation or global carbon price; the greenwashing afterwards. At a time when all economic players keep talking about "transition", we must bring much greater ambition and decide what kind of transition we need and how we will support it.

FOCUS

Should the financial markets worry about social inequalities?

ESG[1]: and what about "S" in all of this?

Now, there is a large degree of consensus about the need to reduce the greenhouse gas emissions in order to halt the acceleration of global warming. Few sceptics still ignore the idea that action is needed, and fast. Thus, the climate emergency has came up among other issues to which governments, people and companies pay more attention. In the financial world, the growing success of green bonds reflects this very well, at least in Europe, where market participants clearly understood the risks involved in directing capital flows to activities that contribute to making the planet less conducive to human life. It is not a question of morality, it is about rationality. However, this financial world does not have the same feeling of urgency regarding social issues, hence, in part, the lower development of social bonds. Undoubtedly, the markets - places of exchange of assets and of price setting - have not hitherto perceived the influence that social questions could have on the valuation of equities, bonds, options and other financial products they were dealing with. After all, their function is not to gauge the degree of social justice, if at all possible. However, once they have crossed certain thresholds, social inequalities can only become an important parameter for markets: as a risk accumulation factor first, but also because unequal societies are ultimately not favorable to economic development per se.

Income gap everywhere, middle classes nowhere

The increasing gaps in income and wealth present two disadvantages for markets which unfortunately overlook these features:

- it increases the likelihood of instability in the corresponding political system which can then mutate into an authoritarian regime in order to cope with protests caused by inequalities that would no longer be tolerated by populations. Markets rarely take advantage of such

1 Environmental Social Governance

regimes which consume too many resources to ensure the pressure they must exert, at the expense of other economic activities that are more profitable or generate more widespread prosperity effects. Moreover, the existence of inequalities favors the generalization of corrupt practices, the deleterious effects of which are both theoretically and practically opposed to an efficient allocation of capital. There is no doubt that some economic actors will find their way in for a while but, by definition, they prevent the development of other more effective actors;

• it corresponds to a weakening of the middle classes, the driving force of consumption in the West for almost a century, and in China for more than a decade. The contribution to value added of the most privileged through increased discretionary consumption and a more expensive average basket, in particular via luxury products according to a scheme identified by Keynes, would not be enough to offset the loss of consumer potential of a strong middle class. Ironically, luxury is not wealth.

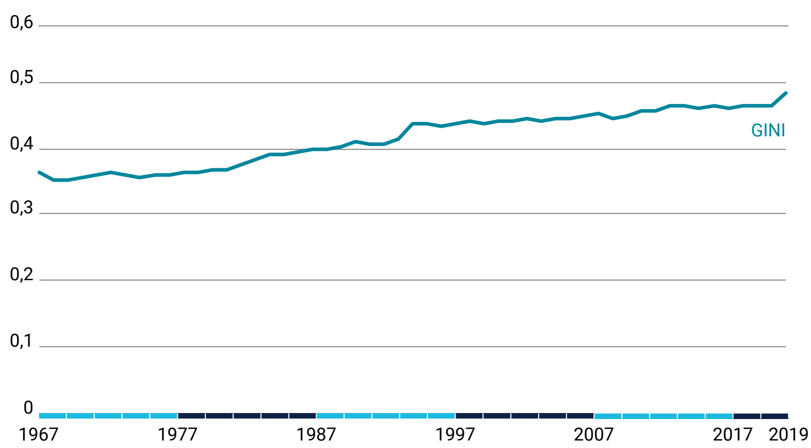
These two aspects converge. The existence of a vast middle class has been the basis of most of the democracies that have emerged since the 19th century. However, until now, markets had little to do with social inequalities. This was neither their field of competence nor an identified risk, since the economic structures of which they had to value the actors in the areas where they were dominant (in other words, the West), were operating within the majority middle classes.

The evil GINI*

So, the question is whether this framework is disappearing. If that is the case, markets should learn to take that into account, because we think there is a potential for that to be detrimental to them in the long term. However, several indicators, both macroeconomic and political, do reflect a decline or even an impoverishment of the middle classes in the West. Let us mention the social movements in France, the collapse of political parties having long promoted globalization which is increasingly perceived as a factor of widening inequalities, and its corollary, the emergence of alternative offers to regulate or limit exchanges. Above all, let us mention the dramatic rise of the GINI index which beats records in the United States (see graph 1).

For the time being, the mechanical effect of low rates is delaying and blurring the change affecting the social fabric of many economies.

GRAPH 1 – GINI* INDEX FOR THE UNITED STATES



* The GINI coefficient is an indicator for measuring income inequality. At zero, the coefficient indicates perfect equality. At one, it indicates total inequality (a household would earn all income).
Source: Census Bureau

Nevertheless, the marginal impacts of this dominant monetary policy in Europe, Japan, the United Kingdom and, to a lesser extent, in the United States, are now tending to be mitigated. It becomes pragmatic for investors, and therefore for markets, to look into social inequalities in the broad sense. Just as it is collectively harmful, if not absurd, to finance activities that degrade climatic conditions, it is collectively counterproductive to grant capital to agents that damage the social environment knowingly or unknowingly, because they contribute to destroying a framework which enhances economic development.

Social bonds, voting rights: the tools exist, the investors just have to use them

Those who share our views will recognize that developing the tools to measure inequality is a delicate exercise. However, some of them exist:

• Bondholders have social bonds which help to channel their investments towards issuers promoting the maintenance of social balances: facilitating access to knowledge capital, healthy housing, health care and transport infrastructure, quality food, water, micro-financing, and fairly paid jobs;

• Shareholders have the voting rights to fulfill their role, because influencing corporate governance is part of their prerogatives. Their action seems to be indirect, and yet it touches the very heart of the system. The academic and business spheres are moving away from the idea of shareholder value[6] (see newsletter 1, p.3); but the words have yet to be put into action. The progress that would allow it comprises: I) the inclusion of employee representatives in boards of directors, II) the development of remuneration policies including –beyond transparency on remuneration of managers– equity criteria explaining how and by what mechanisms employees benefit from value creation, the differences between the lowest, the median and the highest wages, and how the remuneration of managers takes into account the creation of value for the whole social body, and III) the dissemination of products and services adapted to the most deprived populations, especially for basic needs.

Some will think these issues are idealistic or even illusory since they would result in promoting measures at the expense of the interests of the capital providers. This amounts to confusing short-term voracity with medium- and long-term reason. No economy can prosper on the basis of an unequal society, quite the contrary. It is in the interest of shareholders and bondholders to foster an inclusive economy, whose growth benefits all, thereby making it sustainable. In any case, this is the path that Mirova has chosen to take, on behalf of the investors who trust us.

Market breakdown

2019: a remarkable year

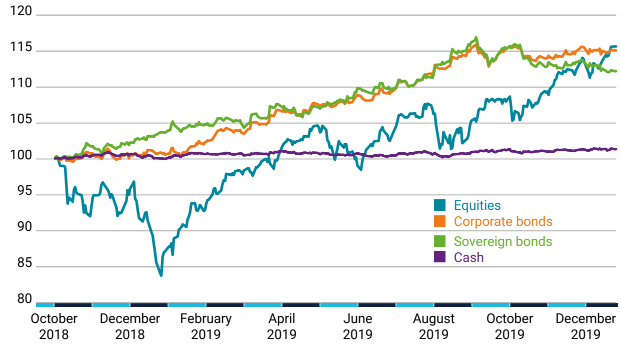
2019 was remarkable in many respects. For instance, all risky assets posted strong gains. This was especially true of equities, with increases of nearly 30% in the United States and nearly 25% in Europe: their best performance since the 2008 financial crisis. However, there are no signs of market euphoria. Excepting January and December, this asset class suffered massive and ongoing outflow throughout the year. Amidst trade frictions and geopolitical risks, most investors remained pessimistic, preferring to invest in bonds.

Last summer's market moves were especially symptomatic of enduring investor nervousness throughout the year. The umpteenth provocation of China by the US President which coincided with disappointing macro figures, was all it took for trading floors to talk exclusively about a risk of recession and end-of-cycle. Such talk led to almost panic movements with a rush towards safe haven assets (gold!) and a yield curve inversion

Admittedly, last year confirmed a slowdown for the global economy, which started end-2017. 2019 recorded "only" 3.1% in real global estimated GDP, following a figure of 3.6% in 2018. Growth slowed across all major countries. Germany was especially impacted. A number of factors contributed to

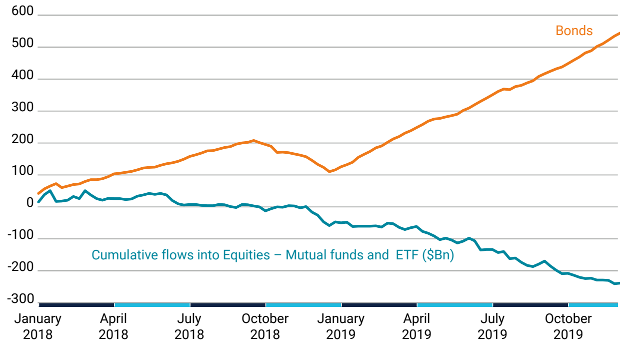
the slowdown: difficulty in grasping the speed of the slowdown in China, tariff increases that penalized global trade, and worsening geopolitical uncertainty (trade conflicts, Brexit, etc.) which weakened visibility and resulted in delayed investment plans.
Such a sluggish environment affected company earnings. Earnings per share remained flat in 2019 in both the United States and Europe. A sluggish macro-economic environment, subpar results, concerned investors playing it safe with less risky asset classes...and yet, a spectacular surge across the stock markets! What's the reason behind this phenomenon?

GRAPH 2 – GLOBAL: MAIN ASSET CLASS RETURNS (IN €, BASED 100 AS OF 01/10/18)



Sources: Bloomberg, Mirova

GRAPH 3 – CUMULATIVE FLOWS-MUTUAL FUNDS AND ETFs

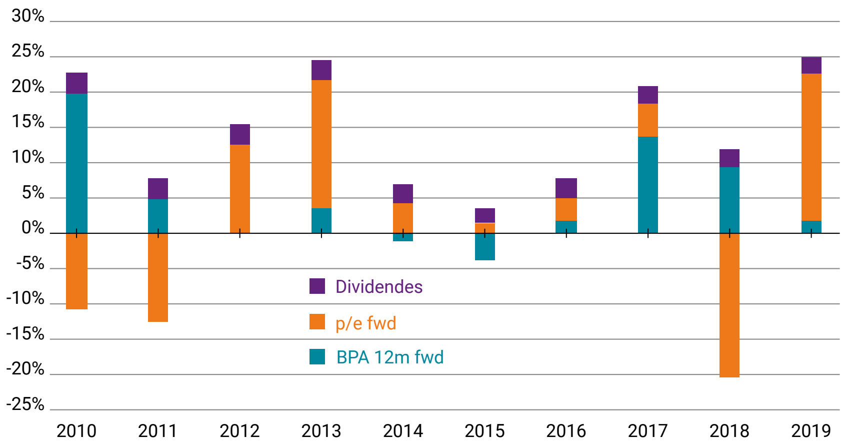


Sources: Bloomberg, ICI, Mirova

What's the reason behind the spectacular surge in equities markets in 2019?

The main reason for the surge in 2019 is of course the decline in 2018! If we take a step back and analyze performance over the last two years, the upturn in equities markets is ultimately quite moderate. The 28.4% increase in the MSCI global equities index follows a decline in 2018 of 8.2%, resulting in a 2-year increase of "only" 17.9%. Out of 17.9%, 5.5% of the increase is due to dividends paid out and nearly 11% from growth in earnings per share (for a cumulative increase in the economy of nearly 7% in 2 years). To sum up, the equity multiple expansion was highly moderate over the last two years.
The second reason is due to the fact that despite several ups and downs, the macro-economic system has not fundamentally changed. Though in a downturn, the global economy continues to grow above 3%. Worldwide manufacturing activity declined last year without impacting

GRAPH 4 – MSCI WORLD RETURN CONTRIBUTION (BY CALENDAR YEAR)

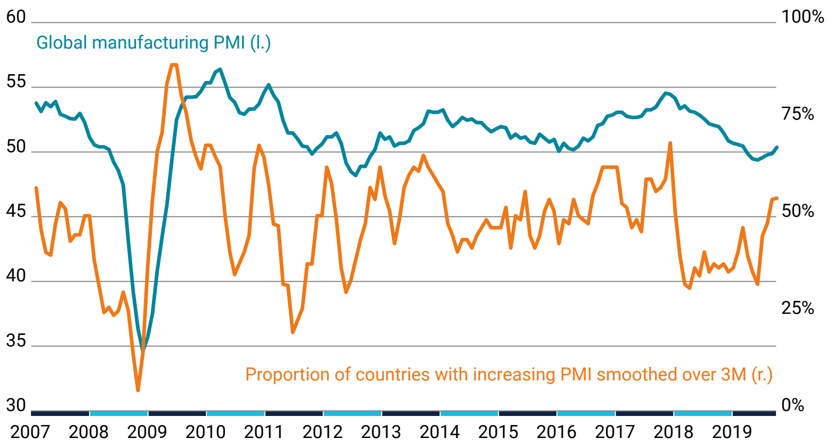


Sources: Les cahiers verts de l'économie, Mirova the rest of the economy. The services and construction sectors, which are less exposed than industry to the global trade uncertainty, showed resilience. This reflected the strength in domestic demand, including in Europe. Economies continued to create jobs and consumer spending held up. Moreover, manufacturing PMI[2] has stabilized or rebounded for several countries over the past few months with new order to inventory ratio returning to above 1, which is rather encouraging statistics. Incidentally, some are forecasting a mini-recovery in the manufacturing cycle following a decline over the last 18 months. As for two series with developments (US-China trade war and Brexit), the first season has ended on a rather positive note (we will wait and see what the second season has in store for us).

The third reason, undoubtedly the most important, is the actions taken by central banks. They maintain more accommodative policies, not only with low key interest rates but also an arsenal of unorthodox asset purchase policies. We should recall that in December 2018, the Fed reduced its outlook, raising its key interest rate for the ninth time by 25 basis points, while the European Central Bank (ECB) prepared the market for monetary normalization. In a bullish economic environment, markets were "detoxed" for central banks to gain more leeway in the event of headwinds. The severe decline in the markets raising fears of a negative wealth effect and an excessively sharp downturn in the economy –the notion of a return to monetary orthodoxy– has fizzled out. A year later, the Fed ended up cutting its rates threefold and has started its asset purchases again so as to increase banks' available liquidity. All other central banks revised their monetary policy accordingly, particularly the ECB (lowered deposit rate, quantitative easing, etc.)

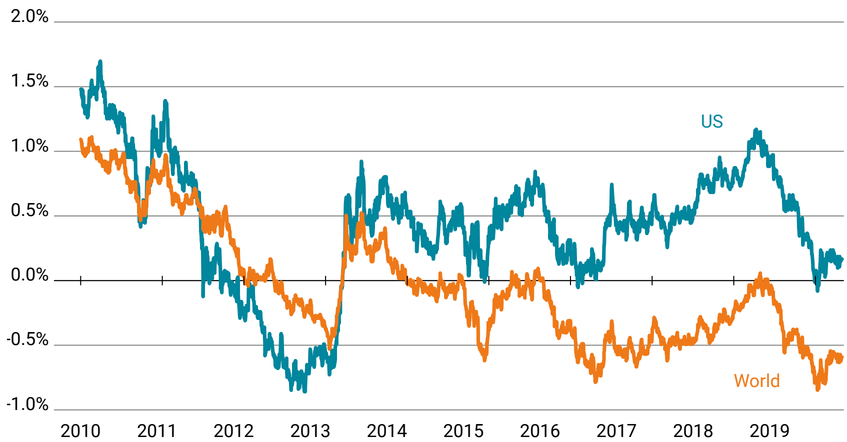
Paradoxically, one final factor that explains the significant surge in markets is pessimism among investors who did not have to drastically "cut" long positions.

GRAPH 5 – GLOBAL MANUFACTURING PMI AND DIFFUSION INDEX



Sources: Les cahiers verts de l'économie, Mirova

GRAPH 6 – GLOBAL: REAL LONG-TERM INTEREST RATES (VIA TIPS)



Sources: Les cahiers verts de l'économie, Mirova

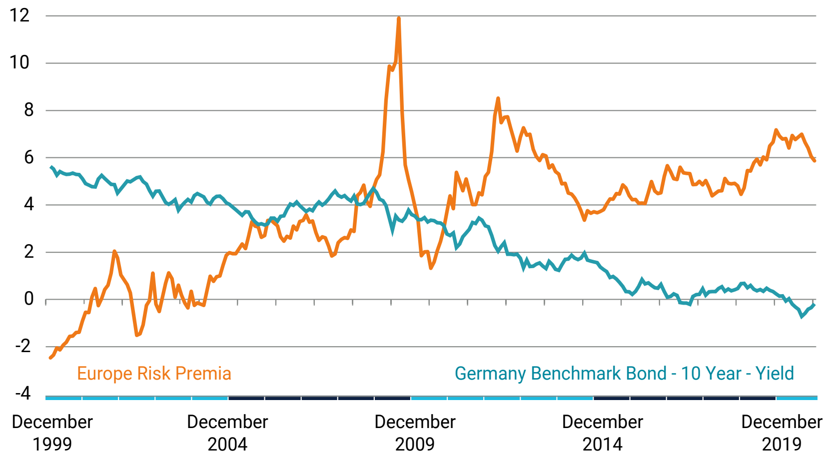
Against this background, we have favored risky assets (equities and credit) for most of the year, specifically until spring and after summer. Our convictions factor in support from accommodative central banks stance, attractive valuation levels, investors' extreme positioning and expectations of macro stabilization based on an easing of geopolitical tensions. At the same time, we have benefitted from long rates through duration positions that we cut end-August.

2 Purchasing Manager Index

Outlook for 2020

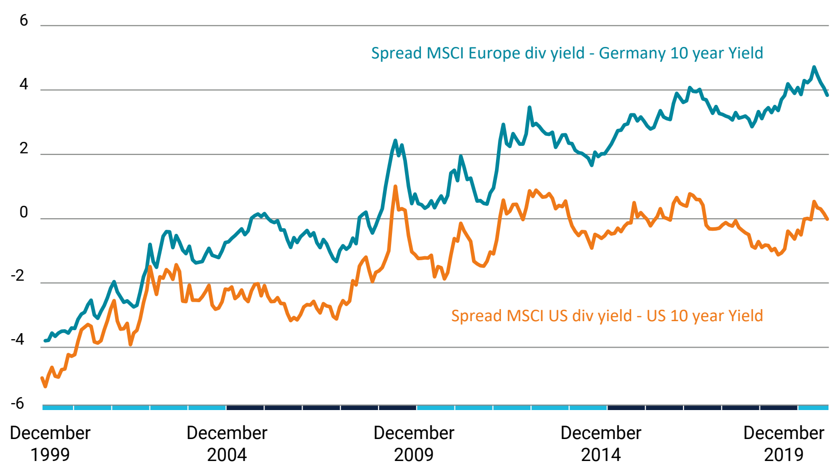
Our central scenario is that of a continued increase in risky assets in 2020, nonetheless with a risk return revised downwards from last year. We expect a more moderate increase, of c.10% for equities markets, with a preference for European equities. We also expect a slight appreciation for European corporate bonds.
There are several reasons for this scenario:
The central banks will retain their accommodative policy stance. We expect a lengthy strategic review period during which rates should remain stable both at the Fed and the ECB. There is no scheduled monetary normalization, perhaps additional interest rate cut if needed, to avoid the risk of recession.
Activity will be propelled by expansive budgetary policies in Europe (specifically France, the United Kingdom, and the Netherlands) factoring in interest rates that will remain low. This is expected to have a positive impact on the real economy over the coming quarters (increased expenditure and tax cuts). However, we unfortunately do not expect a large-scale fiscal stimulus plan in Germany.
The recovery in manufacturing activity, which admittedly is already expected in part by the market, could be stepped up in light of easing trade tensions between the United States and China and a political situation in the UK that has been clarified in the short-term. Global business sentiment should start to heal and help normalize investment activity including inventory restocking.
Jobs and consumer spending performance remains vigorous in the United States and Europe, representing the main growth drivers.
We expect American investors to once again focus their attention on certain segments in the European market. The growth gap between the United States and Europe should narrow as of 2020 and "political" risk should have more of an impact on the United States next year, due to the risk related to the presidential election.
From a more global perspective, demand for equities markets in 2020 should increase (flows from individual investors in particular) whereas global supply should decline (new equity issues are slowing, equity purchase programs are ramping up).
Lastly, equity valuations compared with other asset classes, particularly bonds, remain attractive whereas investors' positioning on this asset class is rather neutral. Nevertheless, for the most part, we have seen the positive effect of central banks on the valuation of risky assets and the accelerated growth expected in 2020 is already expected in part by the market. For this reason, we do expect upside equities, however they will be moderate. Generally speaking, we expect moderate upside risky assets this year.

GRAPH 7 – EUROPE RISK PREMIA VS GERMANY 10 Y YIELD



Sources: Factset, Mirova

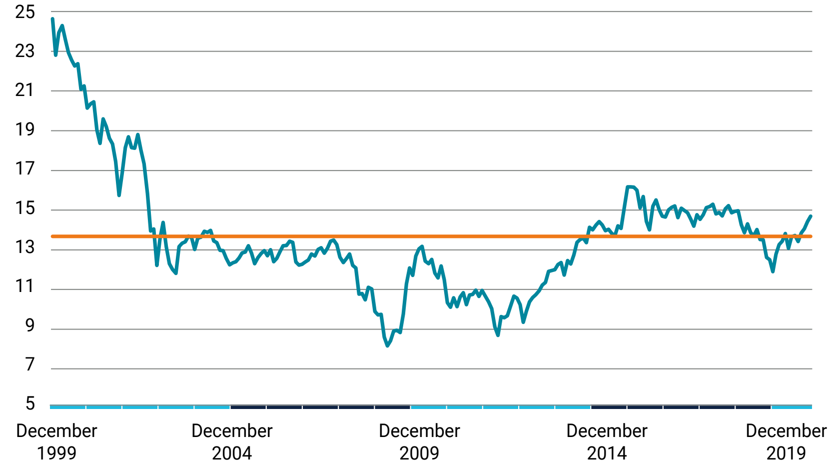
GRAPH 8 – SPREAD BETWEEN MSCI EUROPE/US DIVIDEND YIELD AND GERMANY/US 10Y BOND YIELD



Sources: Factset, Mirova

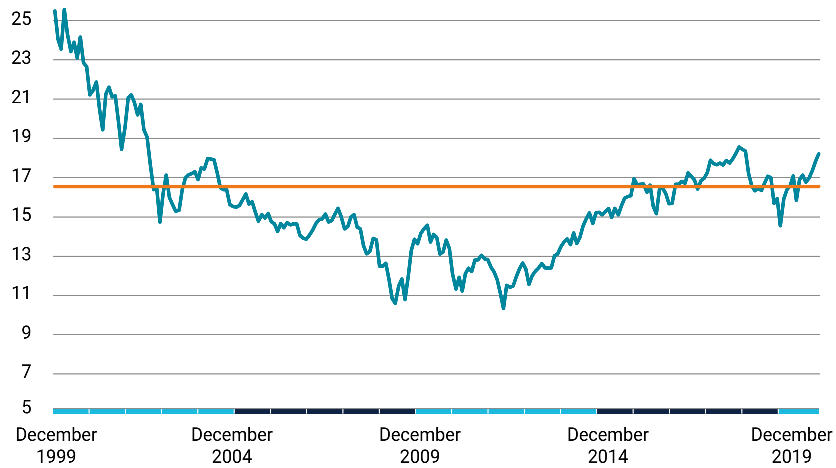
Several events could challenge this central scenario and will require active risk management.
First, there are geopolitical risks. As we write this text. Iran has just responded to the assassination of one of its generals by the US Army with rocket fire targeting two military areas in Iraq. No casualties were reported, no new American military threats, the situation appears to be improving. Without ignoring these risks, we believe that it is in neither party's interest to up the ante and de-escalation is the most credible scenario.
The US presidential elections could also adversely affect the markets. The extreme polarization in itself is a source of nervousness and volatility and some of the proposals set out, such as tax increases and the breakup of the GAFA[3], could have adverse effects. Nevertheless, it is too early to know the presidential election candidates and whether or not the policies at the start of their election campaign will be the same at the start of their term in office.
Looking beyond these short-term risk factors, our main concerns remain the same. Can capitalism be reformed or reinvented to overcome two systemic risks? The environmental crisis (climate change and the destruction of ecosystems) and rising inequality, which are undermining the inter- and intra-generational social compact. At any given moment, these two risks can lead to destructive outbreaks of violence (natural disasters, uprising) and/or seek redress to the disastrous human and economic ramifications in the form of a coercive political regime. Faced with these protean risks, we have no alternative but to oppose the "Optimism of the Will" by investing in the most value-accretive companies in terms of social and environmental performance, both for the impact they may have on society and their ability to leverage their positioning as trendsetters.

GRAPH 9 – PE 12 NTM EUROPE



Sources: Factset, Mirova

GRAPH 10 – PE 12 NTM US



Sources: Factset, Mirova

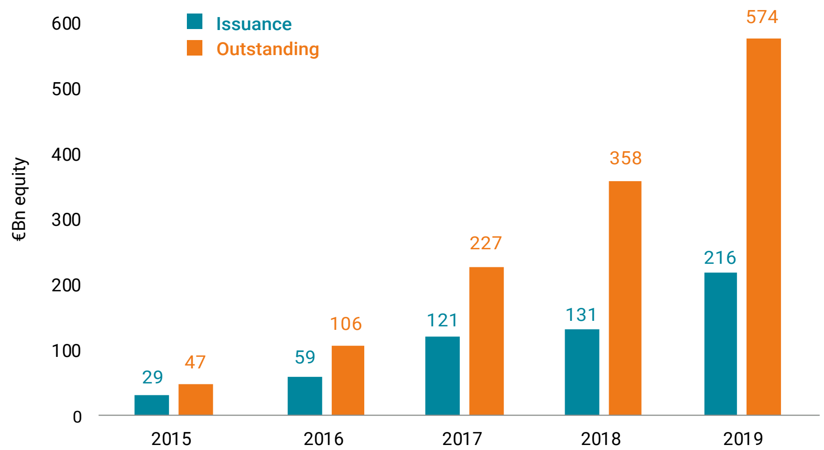
3 Google, Amazon, Facebook, Apple

Green bonds: already twelve years of existence, and a whole life ahead...

Since the first issuance of the Climate Awareness Bond by the European Investment Bank (EIB) in 2007, the green bond market has gained a privileged position among many issuers to reach €574 billion today[4]. In 2019 alone, some €200 billion worth of green bonds were invested. At this rate, the symbolic mark of $1 trillion seems at hand. However, this volume must be compared to the $115 trillion bond market as a whole[5]. Therefore, despite their fast growth, green bonds still represent only 0.5% of bonds outstanding, which means that there is a significant expansion potential for green bonds, insufficiently exploited.

Green bonds, which were formerly reserved for a minority of European issuers, pioneers in this field, who have given them the credit they deserved, are being democratized nowadays. They also diversify and now take on several formats, ratings or subordination levels: senior bonds have been issued, as well as covered bonds, hybrid debts, subordinated debts, green Tier 2 from insurers (see Mirova Newsletter 2, p.9) and banks (the South Korean Shinhan Bank), Sukuk - the securities complying with the precepts of Islamic finance -, and even one contingent convertible bond (CoCo/AT1) from Kookmin Bank[6] through private investment in Korea. The year 2019 has certainly seen a plethora of innovations with some green bonds even displaying contractual subtleties of a new kind, giving rise to real transformations. It is the case of SDG-linked[7] bonds, for instance, and transition bonds (which will be discussed here after). Regarding issuers, a large number of sectors, if not all of them, are now represented. Or course, if some of them are motivated by a real conviction that this instrument presents the best way of highlighting their practices or their products, others come to this market opportunistically, to increase their investor base. Anyway, it is relevant to notice that everyone is coming, thus allowing the market to grow and to diversify. We can still regret a kind of shyness of the governments whose cumulative green bonds hardly reach €50 billion spread across a handful of states on the market dominated by companies and agencies/supranational bodies. However, the various fiscal stimulus plans announced around the world could be a game changer.

GRAPH 11 – GREEN BONDS ISSUED AND OUTSTANDING SINCE 2015 (IN €BN EQUIVALENT; N.B. EXCHANGE RATE AT ISSUE)



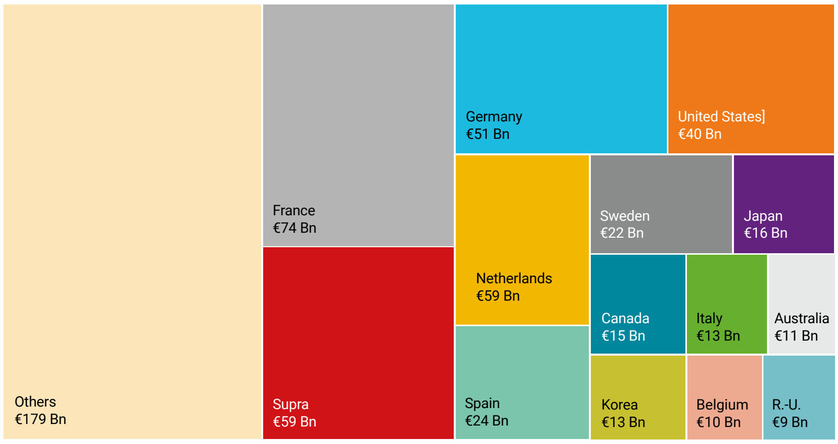
Sources: Mirova Fixed Income based on Bloomberg data aggregated as of 10 December 2019

4 Source: Mirova Fixed Income based on Bloomberg data aggregated as of 10 December 2019
5 Sources: data from Global Debt Monitor, IIF – Institute of International Finance, at the end of June 2019 released in November
6 Sources: Global Capital Asia, article released on 26 June 2019
7 SDG: Sustainable Development Goals defined by the UN.

When the giants wake up... to green bonds

The awareness with lesser or greater delay of the two giants, China and the United States, is crucial to the market. Although they are seemingly reluctant to engage themselves on the environmental issues, their awareness is unavoidable. The question is which giant will be the most lagging behind. China has already issued 17% of the outstanding green bonds – certainly of a quality often discussed. Even though the United States struggles to pass the 7% mark, this year, the country will have issued as many green bonds as France and Germany. Therefore, the trends seem encouraging, despite the reluctance observed sometimes.

GRAPH 12 – OUTSTANDING GREEN BONDS BY COUNTRY OF ORIGIN (IN € BILLION EQ.; N.B. EXCHANGE RATE AT ISSUE)



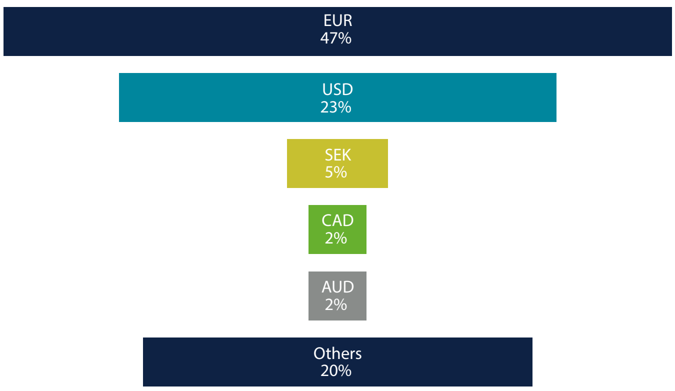
Sources: Outstanding green bonds by country of origin (in € billion eq.; N.B. exchange rate at issue)

Europe is not enough

This leap forward will have to continue in order to meet a growing demand. In fact, the offer does not meet the demand structurally: this is evidenced by the oversubscription rate. On 26 November 2019, the day before Thanksgiving, the oversubscription levels were at all-time high. Despite the increased issuance that day –no less than eight green bonds, exclusive of conventional bonds[8]– demand could not be met. The order books were overflowing, and the green bond of a major bank was oversubscribed six times.

The approximately $125 billion raised from fixed income Investment Grade funds in Europe, in 2019, certainly amplified this phenomenon by providing a substantial demand surplus for the bond market[9], green bonds included. The diversity of customers seeking the latter has never been so wide, as green bonds now attract conventional investors as well as those who are more concerned about the environment. Yet, the green bonds are still far from optimum. In addition, they remain concentrated on a range of currencies that is still too narrow: the euro dominates largely with nearly 47% of issues ahead of the dollar and its 23%. Other currencies, lagging behind, are underrepresented. The cradle of green bonds lies in Europe, but they must go out of it to continue their growth beyond the old continent…

GRAPH 13 – BREAKDOWN OF OUTSTANDING AMOUNTS BY CURRENCY (IN %)



Sources: Mirova Fixed Income based on Bloomberg data aggregated as of 10 December 2019

8 Bloomberg, BondRadar, Informa Global Markets
9 EPFR Global, BofA Merrill Lynch, cumulative flows of euro IG funds since the beginning of the year, as of 29 November 2019

Banks and insurers: opportunities for further enhancement

Two sectors in particular could further increase demand, having substantial and available liquidity: banks (in stocks) and, to a lesser extent, insurers (in continuous flows). Let us add the central banks, which are now in a state of internal conflict for fear of violating their 'market neutrality' principle and causing foreclosure. Freed from its constraints, the ECB could seize some €62.6 billion of euro-denominated green bonds[10] eligible for the corporate sector purchase programme (CSPP). which is part of its quantitative easing programme.

IDLE MONEY: EUROPEAN BANKS ACCUMULATE AT LEAST €1,956 BILLION IN DEMAND DEPOSITS

With low interest rates and prudential rules, the liquidity is piled up in banks through a "forced" hoarding on a broad scale - what to do with it? Central banks have €1,956 billion (around 4 times as much as the green bonds outstanding) in demand deposits[11]. A real "liquidity trap" is being set up, probably the most important in all economic history. Below a certain interest rate, the easing or lowering of interest rates become counterproductive, since banks prefer to keep cash rather than invest it.

There are several reasons for that. Among them, the obligation to issue debts intended to absorb losses, the obligation to respect liquidity ratios or the opportunity cost linked to investments, in terms of equity capital consumption. Actually, a deposit is weighted at 0% while a real estate loan is weighted at least at 25%; a bond is weighted at 50% if it is rated A, and at 75% if it is rated BBB[12]. The yield differential is sometimes very small, which does not encourage to use the deposits but rather to let the money sit. The decade of sector restructuring and monetary easing has also played its part: liquidity collected by banks has rarely been reallocated out of risk aversion. The liquidity injection operations, which at one time exceeded €700 billion[13], have only intensified this phenomenon.

To free up the idle money, a regulatory impulse is to be considered. The first solution explored is the so-called "green weighting factor", which would reduce capital requirements for banks and encourage them to invest more in green businesses. Today, clearly, the remuneration of a green bond for a bank is no different from that of a conventional bond. This green weighting factor can change the game by making the green bond less expensive and allowing it to have a better return on equity.

As we have seen, even if banks are not more present as green bond buyers, they are constantly innovating when it comes to inventing new structures for their issuing customers. Particularly, they seem to promote a new class of bonds: the transition bonds.

Transition Bonds: Heading towards a transition?

Transition bonds is one of the buzzwords in the green bond market space in 2019. But what does it mean? And if it's not part of a transition towards a 2°C and sustainable world, does it really allow the transition we want?

Green bonds demonstrate how the debt capital markets contribute to a greener, more sustainable world. It brought in a level of transparency and accountability not seen in the markets before. It also brought a link to impact. All investments have impact and the green bond market, with its use of proceeds and reporting requirements has allowed fixed income investors to understand theirs. In this regard, any initiative that would require more issuers to be transparent on their financing is welcomed.

However, for investors with an environmental and social purpose, the impact and contribution these investments would have towards an environmentally and socially

10 Source: Bloomberg data as of 31 October 2019

11 Source: data from Q2 2019 of the European banking supervisor (the ECB)

12 Source: final version of Basel III regulation published by the Bank for International Settlements

13 Sources: ECB, page "Open market operations"

sustainable world is of even more importance. Transparency is more a means to an end. The difficulty with transition bonds, as understood today, is their lack of ambition. They would simply improve the environmental footprint of carbon intensive industries. Rather than treating the disease, these bonds would only manage the symptoms of the global environmental challenges we face today.

The goals that link us…

Another novelty that marked 2019 was the emission of the first “SDG-Linked” Bond by Enel. Inspired by the sustainability-linked loan principles, this SDG-linked bond would provide Enel with a lower cost of debt should they achieve targets determined in their sustainability strategy – at least 55% of their energy capacity be from renewable energy sources by 2021 and direct greenhouse gas emissions be below 125g/kWheq21. However, if Enel doesn’t achieve these targets then they would have to pay a step-up of 25 base points of the fixed coupon rate – making it more expensive for Enel to pay back their debts.

This has been warmly welcomed by some actors in the market. By financially incentivizing the issuers to achieve these sustainability targets, the issuers have “their skin in the game”, which, in certain aspects, is interesting. However, if the sustainability targets are not met then investors would receive 25 base points more in interest payments. Thus, achieving the sustainability targets would mean less financial performance for investors. If the goal is to encourage more investors to come and finance the transition to an environmentally and socially sustainable world, this is the last thing they should be told. Financial instruments should be structured in a way that allows investors to achieve financial performance and positive environmental and social impacts; not have the financial performance come to the detriment of environmental and social impact (or vice versa).

Questions are also raised around the impacts they would have on the market. These sustainability-linked bonds are basically general corporate purpose bonds (i.e. the funds are not earmarked for certain projects) issued by companies committed to achieving certain sustainability targets. These bonds are essentially linking these targets to the company’s full corporate strategy and operations. Is there, then, space for those companies to issue a green bond that would only invest in green projects (knowing that these projects are already conceptually being financed through the sustainability-linked bond)? If the answer is yes, at what rate?

2020 and beyond

As the market reflects and ponders on how to best nourish these new products, it must not forget that the green bond market has yet to reach its full potential and also still needs its attention. As mentioned in the previous section we are still far from where we need to be in terms of financing the transition to a 2°C and sustainable world. Green bonds, with their increased transparency and link to green projects, play an important role in that transition. The development of these new products must, therefore, be done in a way that helps the green bond market flourish and not stifle it before it has time to fully grow.

MedinCell, a humanistic pharma

Created in January 2003 with a strong societal commitment and on a visionary governance model, MedinCell has succeeded in positioning itself among companies listed in France, while preserving its identity and its humanist vocation.

MedinCell, a French technological pharmaceutical company, is a true human adventure inspired by two visionary executives, and embodied by about a hundred employees-shareholders, holding more than 46% of the company's capital. Its uniqueness, which also makes its strength, is due to a vision shared by all the stakeholders of the MedinCell mission clearly defined in its statutes: giving access to treatments for all while making employees central to the development of the company. Passing over the shareholder value governance model that has prevailed in recent decades, MedinCell is leading the way towards a new partnership governance model that can reconcile long-term economic profitability with general interest.
The story of MedinCell begins in 2003 with the development of patented technology (BEPO) which allows to replace the oral and daily intake of medicines by a single subcutaneous injection or by a local injection. Thus, the BEPO® technology forms a polymer depot measuring only a few millimeters, that releases the active substance over a targeted period of days, weeks or months, and totally disappears after resorption. This innovation is a breakthrough in the world of health care because it helps to improve the adherence to therapies and the treatment efficiency, two major challenges which, according to the World Health Organization[14], would have more impact than any improvement in medical treatment. In addition, long-acting injection can limit adverse effects, reduce costs and medical waste, notably by significantly reducing the quantity of drugs administered.
Developed by MedinCell on its own or in collaboration with other players, its current portfolio includes products with active pharmaceutical free-royalty substances that are present in medicines already available on the market, thus increasing the likelihood of success. So far, nine programs are under development in different therapeutic areas. Among them, the treatments of schizophrenia and orthopedic postoperative pain are in phases 3 and 2 clinical trials, respectively. Seven other clinical programs are in development at different stages of progress in various fields such as anesthesia, chronic pain, transplantation, urology and contraception.
The latter is particularly emblematic of MedinCell's humanistic vocation. This program is elaborated with the financial support of Bill & Melinda Gates foundation (approximately €20M committed since the launch in the form of subsidies) and is aimed at developing the injectable six-month bioresorbable contraceptive. MedinCell will retain global marketing rights for the product, particularly in the United States where the contraception market

14 MedinCell, following the World Health Organization: Adherence to Long-term Therapies, Evidence for Actions (2003)

weighed more than $5 billion in 2018[15]. In accordance with their Global Access strategy and in order to have a real impact on women's lives, the two partners also plan to make the product widely available, with affordable pricing in emerging economies. This partnership is an example of an economic model that manages to reconcile return with positive social impact.

JOINT INTERVIEW
WITH ANH NGUYEN, CHAIRMAN OF MEDINCELL'S SUPERVISORY BOARD AND CHRISTOPHE DOUAT, CHAIRMAN OF THE MANAGEMENT BOARD

Christophe: Anh, you settled in France to create MedinCell after several successful jobs in the US Why?

Anh: I actually just returned to France, the country that took in my refugee family. I studied here before moving to California. I had some great entrepreneurial successes in the States. For instance, I created Invitrogen which became Life Technologies. It revolutionized the diagnostics market, achieving a valuation of $16bn in twenty years. I came back to France almost by chance in the early 2000s. I was looking for a way to transform the pharma industry by making drugs that are more adapted to patients' needs and more readily available the world over. I met some great researchers in Montpellier who had just founded MedinCell. But you've had an unusual career too, Christophe!

Christophe: You're right. I started my career working for Lafarge in North America where I applied the principles of participative management. I then retreated into the heart of Canada for several years where I managed an isolated lodge that could only be accessed by seaplane. We offered native peoples a way to reintegrate into society. Upon returning to Paris, I worked in strategy consulting. And then as an investor. A radical lifestyle change, but also a worthwhile experience these days. This made it possible for me to find the adventure in which I could invest all my accumulated experience, helping to change the world. That's when you and I met. MedinCell was in the research phase, but it was already a standout company. I was most curious about the vision you had for the company.

Anh: Vision is enables us to make progress and get ahead. At MedinCell, we knew what we wanted: to have a worldwide impact on healthcare. On that basis, two things were key to ensuring our success. We needed to develop technology that would make it possible to create better treatment and make it readily available. We needed a business model that was adapted so we wouldn't get caught up in the traps of the pharma industry. We needed this new model, which enables us to sustain the company's value in order to achieve our plan. You helped us do this, by adopting a human-focused approach to pharma.

Christophe: I escaped my comfort zone to join what was then only a small team. I was drawn in by a human-focused vision and model for pharma, and a business model which is a recipe for success. Employee ownership, collaborations, aligning the interests of everyone including patients around the globe and even shareholders now that MedinCell is a listed company, fair compensation, participative governance, transparency, and employee accountability. We try to adapt the company to the times to improve performance and create the conditions that are conducive to useful innovation. This should be the go-to model for the twenty-first century and France offers fertile ground for its development.

Anh: This business model is a tool for our project. Access to better treatment is a major challenge. The support we receive from our partners, be they industrialists, large NGOs such as the Gates Foundation or financiers, leads us to believe that we are moving in the right direction. But this business model is also a project in itself, which goes above and beyond the pharma industry. Our success will help disseminate the business model and create other top-performing companies with a fair share of the value.

15 Source: MedinCell

Thermo Fisher Scientific: World Leader in Life Science

Thermo Fisher Scientific combines positive social and environmental impact with excellent long-term financial performance. Its mission is to enable its enterprise customers to make the world healthier, cleaner, and safer. Mirova has been invested in Thermo Fisher Scientific since 2014.

Thermo Fisher Scientific is the world leader in life science business, with revenues of more than $24 billion and approximately 70,000 employees globally. Its products and services help more than 400,000 enterprise customers to accelerate research in the life sciences, improve patient diagnostics, deliver innovative medicines to the market, solve complex analytical challenges and increase laboratory productivity. Overall, its products contribute very favorably to improving the quality and accessibility of healthcare, and consequently, to achievement of the UN Sustainable Development Goal 3: Good Health and Well-Being.

To fulfill its mission, Thermo Fisher Scientific consistently executes its proven growth strategy through three pillars. Its first pillar centers on innovation to develop high-impact products and services. Of the top 15 innovations recognized by Analytical Scientist magazine in 2018, 5 came from Thermo Fisher[16] .

Next, the company seeks to leverage scale in high-growth and emerging markets, as China for example, where ThermoFischer has been growing even faster than the market (20% in 2018). Mirova's equity team visited their Chinese headquarters in 2014 to discuss the company's growth strategy in China with the local management team and CEO.

We were impressed by how Thermo Fisher had worked to increase their local presence in alignment with China's five-year plan, which supports better healthcare, a cleaner environment, and a safer food supply. Finally, the company's third pillar relates to continued improvement of its customer value proposition. Thermo Fisher Scientific has scale and depth of capabilities that are unmatched in the industry, and still sternghtening. This unique value proposition helps its customers accelerate innovation and enhance productivity.

Consistent execution of the company's three pillars led to an improved long-term growth outlook: in May 2019, Thermo Fisher Scientific increased its long-term organic revenue growth guidance to 5-7% from 4-6% previously. The revised guidance was driven by four secular factors: higher exposure to the pharmaceutical and biotech sectors, higher exposure to emerging markets, significantly more recurring revenue, and meaningful market share gain against peer group.

Mirova first invested in Thermo Fisher Scientific in August 2014. Since our initial investment, this stock has generated more than 160% total return in USD (more than 220% total return in EUR)[17].

Source: Thermo Fisher

Past performance are not a reliable indicator and therefore do not anticipate future results.

16 Analytical Scientist magazine, December 201

17 Bloomberg & Mirova

Green and sustainable finance: what's new?

The end of the year was marked by several advances at the European level with the publication of two new regulations on sustainable finance. One of them refers to market benchmarks and integrates the rules for building climate benchmarks by creating two categories: the EU Climate Transition Benchmark on the one hand, and the EU Paris-Aligned Benchmark on the other hand. The other is related to the obligation to publish information on sustainability in the financial services sector: it is a European version of the Article 173 of the French Energy Transition Law[18]. It establishes harmonized rules for financial institutions and financial advisors on transparency in integrating sustainability into their processes and financial products. Most of the provisions will come into force on 10 March 2021. These regulations are part of the broader framework of the European Commission's sustainable finance action plan, including its cornerstone, the text on taxonomy defining green assets, which has been the subject of an agreement among the European regulators (EU Council, Parliament and Commission). It should be formally adopted between late 2019 and early 2020. The entry into force of the first part of the criteria on activities to combat climate change should be in December

18 For the first time in France, the Article 173 of the Energy and Ecological Transition Law establishes obligations for institutional investors to inform about their management of climate-related risks

2021, and in December 2022 for the other environmental objectives.
The European Commission and European financial regulators are not expected to slow down their action in the coming months. The European Banking Authority (EBA) has published its own [Action plan](#) on sustainable finance in which the EBA outlines its approach and timeline for delivering mandates related to environmental, social and governance (ESG) factors, and encourages financial institutions to measure and control their climate risks. These developments fall within the context of the European Green deal announced at the beginning of December by the new President of the European Commission, Ursula Von der Leyen, which integrates various aspects related to sustainable finance. Two elements in particular will be taken into account: first, a Sustainable Europe Investment Plan to support the EU's climate and energy objectives by 2030. This could require an additional €260 billion in annual investments, including a fund to finance a "just" transition, to help the most affected regions and sectors. Then comes a sustainable finance action plan for next year, that will include the current measures (European standard for green bonds and eco-label) but also address the issue of relaxing prudential rules for banks and insurance regarding green projects.
There is a lot of news in France as well, as the end of the year saw the Climate Finance Day held in Paris. The speech given on this occasion by the French Minister for the Economy and Finance, Bruno Lemaire, was full of announcements or calls to continue mobilizing the financial center of Paris. In particular, he mentioned the launch of a parliamentary mission on European best practices in green finance, entrusted to the French deputy Alexandre Holroyd, as well as the implementation of climate stress tests on French banks and insurers from 2020. He also invited all European actors to commit to phasing out coal by 2030 (banks and insurers). The Minister also called on the European regulator to increase the capital of the EIB by €10 billion per year for the financing of the ecological transition, to step up its efforts on taxonomy and to implement a carbon tax at borders by 2022.

FOCUS

2020, the year of biodiversity

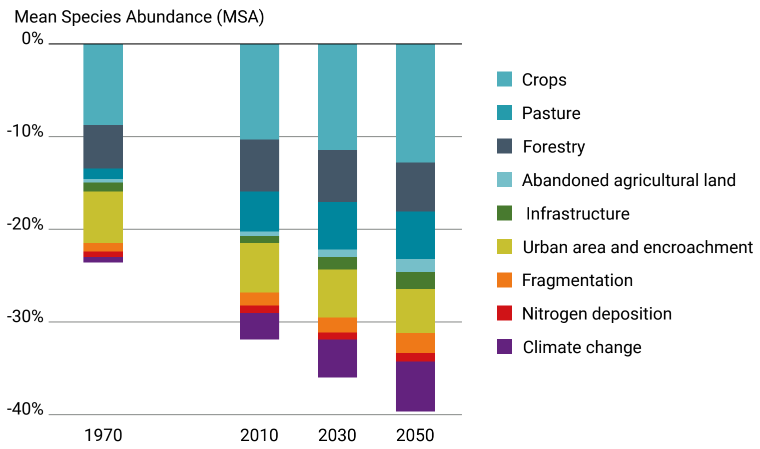
The International Union for Conservation of Nature (IUCN), one of the leading NGOs dedicated to biodiversity, will held its World Congress in June 2020 in Marseille, France. Most importantly, the UN Convention on Biological Diversity (CBD) will held its 15th meeting of the Conference of the Parties (COP15 biodiversity) in October 2020 in Kunming, China. The objective of these two major events is to reinforce the international action for the preservation of biodiversity.
It was high time! While we have seen a growing awareness of the climate issue in recent decades, the preservation of life and ecosystems has so far remained the poor relation of environmental action. Yet, the scientists agree on the gravity of the situation. On land or at sea, from large vertebrates to insects, animals and plants which are not domesticated by humans are in sharp decline, and their natural habitats are more and more degraded every day. A few figures allow to measure the scale of the phenomenon. Since 1970, vertebrate populations have declined by 60%. Nearly 40% of freshwater fish are threatened with extinction. In 25 years, the world's forest cover has lost 20% of its area. More than 50% of wetlands disappeared during the 20th century. Beyond these global figures, some areas with an exceptional wealth of biodiversity, the biodiversity hotspots such as the primary forests of South East Asia or the Great Barrier Reef in Australia, are each day a little more endangered. In addition to the ethical considerations of "respect for nature", this drop in biodiversity is now jeopardizing the proper functioning of our societies. Environmental degradation already has concrete impacts on our health and could ultimately have an impact on global food security.
The causes of this nature's decline are well known. First, our agricultural practices have become unsustainable. In particular, the increasing weight of meat in diets across the world is putting increasing pressure on ecosystems. It is estimated that more than 80% of arable land is used to produce meat, too often through intensive farming practices, irrespective of animal welfare and of the environment. Yet, meat accounts for less than 20% of calories and less than 40% of the proteins consumed by man. It is also the massive use of pesticides and fertilizers that endangers natural balances.
While the impact of agriculture is predominant when it comes to the wildlife extinction,

other human activities also bear a part of responsibility. The growing presence of man everywhere through industrial or mining activities, and more particularly urban sprawl and transport infrastructure, fragments ecosystems. The increase of our pollution and waste of all kinds, and especially our plastic waste, is also a main concern. Finally, climate change is expected to be one of the main causes of future biodiversity loss.

This observation calls for a major transformation of our economies. Food industry actors will have to redefine the standards of their businesses to offer less meat and provide food based on organic products as much as possible. Construction, building and infrastructure actors will need to rethink their economic models to avoid urban sprawl and ecosystem fragmentation. Regarding forest management, we must succeed in reversing the trend where the world's forest cover is reduced a little more each year, in order to initiate reforestation efforts that contribute to restoring healthy ecosystems while storing carbon. More generally, we must succeed in developing circular economy by limiting overconsumption, extending the useful life of our objects and encouraging reuse and recycling. Finally, preserving biodiversity gives us an additional reason to fight climate change by reducing our consumption of fossil fuels and encouraging the emergence of low-carbon solutions in all sectors of the economy.

Those actors who are well positioned on these solutions are already at the heart of our investment strategies. In 2020, we will further strengthen our attention to these issues in our investment choices, in our engagement with issuers and public authorities, and in the implementation of impact measures. We are convinced that the financial sector has an important role to play in the emergence of this economy more respectful of life.

GRAPH 14 – PRESSURE DRIVING BIODIVERSITY LOSS IN THE TREND SCENARIO



Source: PBL Netherlands Environmental Assessment Agency

Measuring

Mirova Consolidated Equity

31/12/2019 – Index: MSCI Europe

Impact on the achievement of the SUSTAINABLE DEVELOPMENT GOALS (SDGs)

EXPOSURE TO POSITIVE/FAVORABLE IMPACT TO SDG

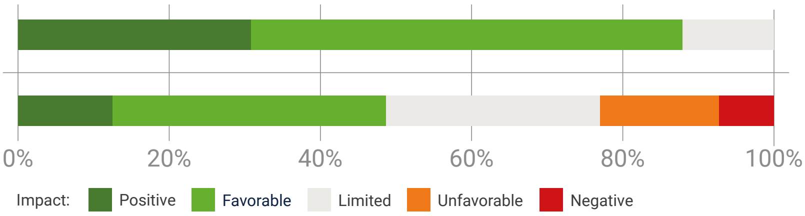
Fund 88%

VS.

Index 49%

Coverage rate for fund: 100%
Coverage rate for the index: 100%

% OF ASSETS*



*Cash and cash equivalent excluded

Source: Mirova

Key impact indicators

CLIMATE CHANGE

Climate change trajectory

Funds
+1.5°C

VS.

Index
+4.1°C

Coverage rate for fund: 99%
Coverage rate for the index: 100%

Source: Carbone4/Mirova

GENDER EQUALITY

Women in executive committees

Funds
19%

VS.

Index
15%

Coverage rate for fund: 98%
Coverage rate for the index: 99%

Source: Mirova

EMPLOYMENT

Average yearly change in workforce (2015-2018)

Funds
7%

VS.

Index
4%

Coverage rate for fund: 100%
Coverage rate for the index: 100%

Source: Mirova, from company reports

Impact mapping to the SDGs

		Share of positive contributors*	Corresponding SDGs
ENVIRONMENT	CLIMATE STABILITY Limit GHG levels to stabilize global temperature rise under 2°C	56%	9, 13
	HEALTHY ECO-SYSTEMS Maintain ecologically sound landscapes and seas for nature and people	47%	14, 15
	RESOURCE SECURITY Preserve stocks of natural resources through efficient and circular use	34%	12
SOCIAL	BASIC NEEDS Basic services (Food, water, energy, shelter,health, etc.) for all	18%	1, 2, 3, 6, 7, 10
	WELL BEING Enhanced health, education, justice and equality of opportunity for all	49%	3, 4, 5, 10, 11, 16
	DECENT WORK Secure, socially inclusive jobs and working conditions for all	25%	8, 9, 10

*Sum of strategy/index holdings with Positive or Committed opinion, cash and cash equivalents excluded

Source: Mirova

Mirova Consolidated Fixed Income

31/12/2019 – Index: Barclays Euro Aggregate Corporate

This information relates to all the fixed income funds managed by Mirova

Impact on the achievement of the SUSTAINABLE DEVELOPMENT GOALS (SDGs)

EXPOSURE TO POSITIVE/FAVORABLE IMPACT TO SDG

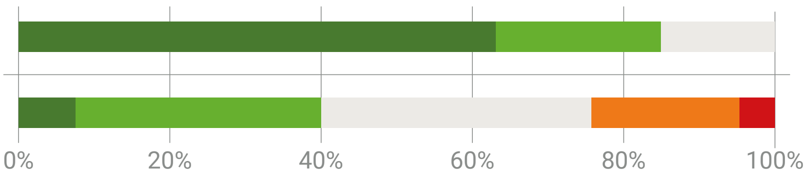
Fund 85%

VS.

Index 40%

Coverage rate for fund: 100%
Coverage rate for the index: 94%

% OF ASSETS*



*Cash and cash equivalent excluded

Source: Mirova

Key impact indicators

CLIMATE CHANGE

Climate change trajectory

Funds

+1.5°C

VS.

Index

+4°C

Coverage rate for fund: 84%
Coverage rate for the index: 88%

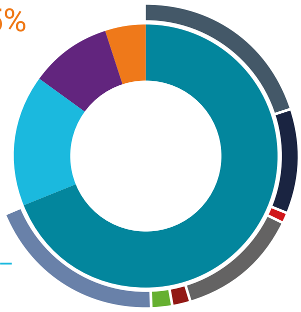
Source: Carbone4/Mirova

SUSTAINABILITY BONDS

Sovereigns 5%

Corporates – financials – 10%

Corporates – non financials – 16%



Sustainability bonds 69%

20% Renewable energy
11% Energy efficiency
1% Sustainable waste & water management
13% Clean transportation
2% Other environmental

0% Affordable housing
2% Other social
19% Diversified

Source: Mirova

Impact mapping to the SDGs

	Theme	Share of positive contributors	Corresponding SDGs
ENVIRONMENT	CLIMATE STABILITY Limit GHG levels to stabilize global temperature rise under 2°C	76%	4, 13
ENVIRONMENT	HEALTHY ECO-SYSTEMS Maintain ecologically sound landscapes and seas for nature and people	49%	14, 15
ENVIRONMENT	RESOURCE SECURITY Preserve stocks of natural resources through efficient and circular use	50%	12
SOCIAL	BASIC NEEDS Basic services (Food, water, energy, shelter, health, etc.) for all	7%	1, 2, 3, 6, 7, 10
SOCIAL	WELL BEING Enhanced health, education, justice and equality of opportunity for all	17%	3, 4, 5, 10, 11, 16
SOCIAL	DECENT WORK Secure, socially inclusive jobs and working conditions for all	10%	8, 9, 10

Source: Mirova

January 2020
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