BEST PRACTICES FOR THE MANAGEMENT OF INVESTMENTS OF THE ADMINISTRATORS OF THE GENERAL PENSION SYSTEM [1]

Resume

The objective of this document is to present the best practices on investment management and the adequate administration of the resources of the affiliates of the General Pension System. The preparation of the document part of a collective exercise of discussions with various industry players and provides a roadmap to align the investment management of fund managers pension with international standards and recommendations of the Mission l Market Capitals of 2019.

The document highlights a series of good practices and principles focused on strengthening the management of fund managers in terms of their strategic and tactical asset allocation, asset selection, and disclosure of information to affiliates . In addition, the document seeks to recognize the complexity that the multiplicity of objectives of the different stakeholders adds to investment management , for which it proposes a way to align incentives and combine the interests of the main actors of the G eneral P S ystem. ensions .

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Abbreviations

Abbreviation	Concept
AEA	Strategic Asset Allocation
AFP	Pension and Unemployment Fund Administrators
ATA	Tactical Asset Allocation
ASG	Environmental, Social and Corporate Governance
FCP	Private Equity Fund (s)
GIPS	*Global Investment Performance Standards*
IOPS	*International Organization of Pension Supervisors*
MMC	Mission l Capital Markets
NAV	*Net Asset Value*
SFC	Financial Superintendence of Colombia
SGP	General Pension System
TCFD	*Task Force on Climate-related Financial Disclosures*

Introducció n

The objective of this document is to identify a set of standards and best practices for the investment management of pension fund managers , seeking to promote that they are a point of reference towards which the industry converges progressively .

For the SFC , the need to have a benchmark of best practices lies in five main reasons :

First, it s and has identified a large number of parties related to the pension system , which adds a higher level of complexity to administering the resources of affiliates[2] . Second , the most recent economic literature recommends the adoption of practices that explicitly incorporate the objectives of the affiliates in the construction of managed portfolios . Also, h ay a need clear metrics implement risk and performance at the portfolio that are aligned with the goals of members and that yuden to the fulfillment of the same .

Fourth, s and hopes that the recommendations made by the Mission of the Capital Market (MMC) in 2019 resulting updates normativ to s which would imply a significant change in the investment management of pension funds . Finally, e T here called for the institutional investors Consider in integrating risk factors for long - term , in particular the rie s gos associated with factors Environmental, Social and Corporate Governance in the management strategies of resources under their administration.

In this context, the SFC considered it necessary to define a set of practices or principles that guide the investment processes of pension fund managers , encouraging the industry to adapt to the standards observed at the international level and anticipate potential legal changes and regulatory arising from the recommendations of the Mission L Capital Markets .

The principles included in this document are the result of a collective discussion process , led by the SFC , which was developed with the participation of pension fund managers in Colombia and other relevant stakeholders. [3] . In addition to compile r the proposals of the administrators , it sought to analyze , in the light of the local context , the best practices presented by multilateral institutions, relevant actors in the market , academicians , among other experts , who were i nvitados to discuss on innovative processes international level in portfolio management. Likewise, the principles and good practices outlined in this document incorporate the results of a review of the relevant international literature, as well as the recommendations presented by the MMC [4] and the analysis of the S FC team .

E l This document is divided into four sections , in addition to this introduction. In the first section we present the best practices identified during the discussion on AEA and ATA . In the second section best practices are discussed and defined principles regarding asset selection and execution of investments. E n the third section will address the standards and principles related to disclosure of information to members and the general public. Finally, the fourth section is offering a balance of the discussion agenda and the present general conclusions of the exercise .

1. Strategic and tactical asset allocation

Is a section reflects the conclusions of the first of the three modules of the agenda, which discussed the standards and best practices AEA and ATA . In particular, is a section reflects six general concepts on which it delves below:

- First, it is considered appropriate to carry out an analysis of the different related parties in order to establish the objectives that must be incorporated in the investment process and the way in which they can be adopted. In any case, at a strategic level, the main objective of the investment process must be aligned with the objective of the affiliates.
- Second, it is evident the need to incorporate passive expected in the process of defining the strategic portfolio and tactician of funds decumulation and explicitly define the time of the working life of the affiliate from which should would implement a measurement of risks and performance in accumulation portfolios relative to future flows associated with the payment of pension benefits .
- Third, it is considered important to clearly define the supervisory and strategy functions of the risk and investment committees.
- Fourth, the information presented to the different internal governing bodies should meet the criteria established by Basel III.[5] and its structure should be aligned with the objectives of the funds.
- Fifth, it is identified as a good practice to elevate the implementation of risk principles (credit, liquidity and market) to the strategic level, so that their evaluation is made at the portfolio level.
- Sixth , are considered matters ASG are risk factors relevant and should be integrated into decision - making processes. In this sense , in addition to being part of their fiduciary duty, the integration of ESG matters in the risk management of pension fund administrators is considered a good practice .

1.1. Investment principles

Proper management by l as managers of the SGP should laugh from a clear identification of objectives and interests l a s divers to s parties interested in the industry [6] **.** In that order of ideas, the investment policy, as the guiding axis of the investment process of the fund managers, should try to integrate these interests and, at a minimum, should be aligned with the objectives of the affiliates as the main interested party .

The construction of the investment portfolios should be consistent with the interests of the affiliates as the main stakeholder. In particular, the strategic objective of portfolios should be focused on r educe the volatility of the value of the counter Esper ada in funds decumulation and maximizing benefits of pension funds accumulation [7] . Thus, the definition of return objectives and assessments of the performance of portfolios should n set in terms of units of pension benefit.

The s administrator s should n defi ne explanatory text c i t ely investment objectives of each of the funds to build - up and to tion based on the profiles of members . The investment objectives should be aligned with the expected pension benefits , which must be explicitly defined by the manager for each of the types of funds . In this sense, the fund managers should establish the most suitable objective for each of the accumulation funds .

The profiling of the affiliates and their assignment to a portfolio should be carried out based on objective variables. E l risk profile of members should be defined by age and other criteria objectives that help the optimization of l profile and not a subjective assessment of each affiliate in terms of their risk tolerance. Primarily, members should be profiled based on the time horizon prior to reaching retirement age.

The AEA should represent a benchmark in front on which to measure performance should define the budget risk managers of portfolios. In addition to being defined so prior to the investment period and to be replicable and transparent, said reference should be aligned with a clearly defined targets for each portfolio.

The performance and risk metrics of the portfolios should be designed in accordance with the strategic objectives, that is, they should be aligned with the stability of the expected allowance in the decumulation funds and with the maximization of the pension benefit of the affiliates of the fund s of accumulation . In particular, it s and should laugh implemen t ar performance evaluations of the portfolio on the AEA , and should also evaluate the performance of the portfolio in terms of l benefit wait or according to the objective of each fund . Similarly, risk metrics should be built around *pension-risk* , that is, in terms of deviations from the target benefit , expressed in units of said benefit or the probability of not reaching it.

Administrators should define asset classes , in accordance with the characteristics of the assets , that they consider relevant for the fulfillment of the portfolio objectives. Managers should assess whether the current distinction between asset classes is consistent with the major risk of the portfolio s and, likewise, if existing classes of assets including alternative, grouped classes sufficiently homogeneous investment considered similar to strategic level.

Management of portfolios of funds desacumulac i ng should would incorporate a strategic level characterization of future cash flows associated with the payment of pension benefits . Managers should laugh contemplate both assets and liabilities, this in order to properly calibrate the *glidepath* of portfolios and to manage the risks of duration and market risks that could affect the expected allowance of members .

L as managers should laugh establish the time of life of members and / or fund accumulation from which incorpo ren in the definition of the AEA 's future cash flows associated with the payment of pension benefits expected . In particular, l to incorporation of future cash flows associated with the payment of pension benefits expected to be it would be focused on defining a path that allows gradually reduce risks relating to funds disaccumulation when appropriate .

Decisions on investment and administration of resources should be made under the concept of a comprehensive portfolio. The principles should apply to the aggregate investment strategy and not to individual investments in isolation. In this sense, in the face of adverse market events that affect individual investments , the incidence of risk in the portfolio should be comprehensively evaluated . In itself , mechanisms should be implemented to assess the marginal impacts on profitability and risk of potential investments and / or new classes of assets.

Regulatory restrictions should be incorporated as a restriction of the models on the basis of which the AEA and / or the ATA are defined . E n any case , regulatory restrictions should not n incorporated as an objective of the model . It should not be ignored that there are restrictions established in the regulatory framework, which includes the limits and quotas of eligible assets and compliance with minimum profitability, among others. Therefore, while the objectives of the affiliates should define the objectives of the model on which the construction of AEA is based , the administrators should define whether they integrate the regulatory restrictions at a strategic and / or tactical level. Regulatory restrictions should only be included if, from their analysis, it is evident that they adequately reflect the profiles of the different funds. Likewise , the measurement of performance management strategic and / or tactical (if they apply) permit should differentiate regulatory components and management of investment teams regarding strategic benchmark.

Administrators should define an ESG policy , as well as mechanisms for its monitoring and updating. Likewise, the policy should include the justification for its development, the conceptual bases or definitions and the list of strategies that it considers relevant for its implementation. In cases where applicable, the policy ASG should note c or how these matters are integrated into the exercise of their political rights t t i cos, including the strategies for relations with em i sors . On this ú Finally, the s managers deb Erian have clear criteria against the exercise of this right and other forms of relationship with the issuer .

L a policy defined by the administrators in the field of ASG should address the integration strategy, understood as in Clusia it or n of the factors ASG d e systematically and explicitly in their risk management . In this sense, the policy should reflect how the integration of ESG matters allows the identification and management of long-term risks , how it relates to fiduciary duty and how this is aligned with the objectives of the affiliates.

The integration of ESG factors in risk analysis should be aligned with stakeholder analysis and their potential impacts on portfolio performance in the long term . Plans, processes and systems developed to integrate the issues ASG should n be focused on the analysis of potential impacts positive and / or negative that the investment process can generate in the objectives of the stakeholders. In this sense, the incorporation of ESG factors should consider that they can have a direct and potentially substantial financial impact on pension savings, especially in the long term .

The incorporation of ESG factors and criteria for responsible investment in alternative funds[8] or volunteers should reflect the preferences of the affiliates and integrate strategies different from those of the default funds. In the cases in which these funds are assigned a denomination related to some of the three dimensions of ESG or under names such as sustainable, responsible , or similar, the administrators should clearly justify the assignment of that denomination, explain the strategies used and communicate clearly if, in addition to financial performance , they seek to generate a specific impact . For those funds that have a denomination green, the s manager s could IAN refere n astern alignment with the taxonomy Green Colombia. For all cases in which generation of impact it promises, accountability must would include performance against the expected impact.

1.2. Risk principles

Risk management should be aligned with the affiliates' objectives, for which ex ante defined risk budgets should be used in relation to the fulfillment of the objectives . In particular, risk management should be focused from the AEA. In this way, in the ATA, portfolio managers could manage investments in different classes of assets or risk factors in order to seek to generate additional return to that of the strategic benchmark, the foregoing subject to the definition of budgets for each risk . Good practice should also be oriented towards risk management that contributes to an orderly *de-risking* and relative to the objectives of the funds through the different accumulation portfolios , when approaching the pension age of the affiliates, in accordance with the objectives of the funds defined at a strategic level.

A characterization of the future flows associated with the payment of expected pension benefits from the accumulation stage should be carried out, this with the purpose of establishing risk / return objectives that are aligned with the objectives of the decumulation portfolios . This assessment should contemplate elements central as the duration , which allow managers maintain risk management aligned with the characteristics of members and with the objectives of the funds. For portfolios decumulation , valuing l liability should be one of the main inputs for the development of l to AEA and ATA, while in the portfolios of accumulation , a good practice would define the moment of life of the affiliate and / or fund accumulation from which necessary is performed at the least one characterization of flows expected associated with the payment of pension benefits, this in order to assess the risks of the portfolio on the objectives of he himself .

Administrators should make use of long-term metrics that allow the control of *pension-risk* in the AEA's definition of the decumulation portfolios . In particular, the definition of budgets in the AEA should be developed with the objective of mitigating *pension-risk* , understood as the possibility of not having the necessary assets to meet an objective path of pension benefits. This risk management approach offers advantages to the management of the fund managers and is consistent with portfolio management focused on seeking to meet the objective of the funds with a certain level of confidence.[9] . This good practice to be successful it is necessary that s AFP count n policies and procedures for proper profiling of members for proper inclusion in the fund that corresponds to your target.

In the long term: The use of metrics that allow the control of *pension-risk should be established* in the definition of the AEA of all accumulation portfolios . It is considered good practice to make a transition from current market risk measures to metrics aimed at quantifying the potential impacts of investment volatility on expected pension allowances. These measures should be related to *pension-risk* , understood as the risk that the returns on assets are not in accordance with the objectives of maximizing the expected pension benefits in the accumulation portfolios.[10] .

The s AFP should n define a feedback mechanism AEA estimates based on risk and risk observed at the tactical level. The AEA definition process should be reviewed periodically taking into account the permanent monitoring of the markets, in such a way that mechanisms are generated for the modification of risk budgets and the calibration of tactical ranges, even if the time does not coincide. with the periods defined internally by each administrator for the AEA review. In the AEA modification processes and risk budgets , the review and approval instances must be defined. This feedback should be defined internally by the s AFP, according to the guidelines established by each manager.

Administrators should measure the performance of the funds against the risk budgets established in the strategic allocation. In line with the definition of risk budgets in the AEA and the definition of the reference (or *benchmark*), it is considered a good practice to measure the performance of investment decisions against the risk budgets defined. Said risk measurement should ideally be framed within a *performance attribution* analysis that quantifies and allows managing the risk / return ratio of asset selection decisions and deviations from the weights defined in the reference for the corresponding time horizon. . Performance measurement should allow to assess the quality and timeliness of decisions Tactic ace . In addition, in this sense, it must allow evaluating the decisions actually made by the administrator.

Administrators should define dynamic thresholds for each risk factor in accordance with market conditions and the global risk budgets that have been defined. Within the definition of risk budgets, it is considered a good practice to define tolerance thresholds for portfolio management and for them to be dynamically defined as a function of risk indicators and / or market conditions. These thresholds could ideally be defined in terms of maximum consumptions of previously defined risk budgets.

The risk analyzes should incorporate the duration risk factor, considering that the age at pension is one of the main variables for profiling the affiliates. A dynamic management of the duration of the portfolios is considered a good practice so that the interest rate risk is at all times aligned with the long-term objectives of the portfolios. Within this management, it is important to bear in mind the risk of reinvestment of assets, since managing this risk is more relevant given the long-term horizon of these portfolios. On the other hand, for variable income and alternative assets, it is considered a good practice to have a dynamic management of investment horizons in this type of assets based on the portfolio objective.

In the long term: Mechanisms should be considered for the immunization of portfolios against interest rate risk, the foregoing in order to ensure minimum levels, with a certain level of confidence , of the pension allowances to be received by the affiliates.

Administrators should integrate ESG matters into their risk management as one more risk factor. Consideration of these issues responds to adequate risk management for nature and the possible s impact s associated with matters ESG , such as climate change and demographic changes could mean one possible significant impact on the risk profile / return of the portfolios [11] .

As a first approximation for the integration of ESG issues in the AEA and ATA, it is recommended that the fund managers begin to build evidence on how these can affect the performance of the investments. A good practice that is evident in the international industry is to explore how ESG issues , such as physical risk and transition risk [12] associated with climate change, it can n incorporated in testing stress to establish their potential impact on long - term returns [13] .

Administrators should define stress tests of their portfolios that allow to identify the impact of tactical deviations in relation to the strategic reference. Conducting stress tests, at a frequency consistent with the objectives of the managed portfolios, is a good practice that is evident in the industry. In addition to the above, both historical and hypothetical market shocks should be evaluated. In any case, it is important that the evaluation of the stress tests is carried out in conjunction with an analysis of the probabilities of the occurrence of said exercises, as well as establishing possible deviations in terms of risk / return relationships compared to the strategic reference.

In the long term: The impacts of stress scenarios should ideally be quantified in relative terms compared to their impact on the pension allowances expected from members.

Administrators should define appetites for at least credit, market and liquidity risk at the portfolio level. In addition, they should involve the analysis of risks in addition to market risk, traditionally managed at a tactical level, to investment decisions at a strategic level. It is considered a good practice to incorporate management indicators at the portfolio level for credit, market and liquidity risks that provide feedback on investment decisions at a strategic level. The use of risk budgets at the portfolio level contributes to a comprehensive vision of the risks assumed for a better definition and control of investment policies at a strategic level. Likewise, ESG factors should be considered within the definition of the risk appetite of the administrators.

There should be adequate mechanisms that allow the identification, quantification and management of non-financial risks and non-traditional financial risks (evaluation of the manager of ETFs, Alternative Assets), and their potential impact on the risk / return objectives of the portfolios. Administrators should have manuals and procedures in place to adequately manage non-financial (legal, operational, regulatory, reputational) and non-traditional financial risks (evaluation of the manager of ETFs, Alternative Assets and ESG). Policies for non-financial risks should seek to minimize the impact of such risks on compliance with adequate strategic and tactical asset management. Non-traditional financial risk measurement policies should be implemented at both the tactical and strategic levels .

1.3. Principles of Corporate Governance

The Board should clearly state the functions of the committees and investment risk , which in turn must be consistent with the framework normativ or force. These functions should be reflected in the regulations of each of the committees. It is considered a good practice that the technical discussions of the AEA and ATA are delegated to the committees and the criteria that define the situations that must be reported to the Board of Directors are established.

The investment committee should have clearly established its strategic and supervisory functions. At the strategic level, the investment committee should establish the objectives of each of the funds based on the analysis of interested parties with the support of the risk areas. Likewise, this committee should define the AEA and the tolerance of deviations at the tactical level. This committee should also evaluate the ATA's performance relative to AEA. Its supervisory function should be focused on verifying that the portfolio's tactical allocation complies with the limits defined at the strategic level and periodically evaluating that the defined strategic allocation is aligned with the investment objective of the respective fund. In terms of the composition of the committee, it should be made up of members who have a diversity of experiences and knowledge, this in order to enrich the process of building the strategic references of the different funds and incorporate greater scope into the analyzes. that support them.

The risk committee should have clearly established its strategy and supervision functions and not limit its analysis to compliance with limits and policies . At a strategic level, the risk committee should be in charge of defining the AEA's budgets and risk appetites so that they are consistent with the objectives of each fund , as well as the methodologies for their calculation . At the supervisory level, the risk committee should monitor the consumption by the investment areas of the risk budgets, as well as that these budgets are adjusted to current market conditions and are consistent with tolerable risk levels in each portfolio. Likewise, the risk committee should define market, credit and liquidity risk appetites , among others, for each of the managed portfolios. In terms of the composition of the committee, it should be made up of members who have a diversity of experiences and knowledge, this in order to enrich the process of construction of risk budgets and incorporate greater scope into the analyzes that support them. .

The members of the committees should have training and objective evaluation criteria, similar to those applicable to the members of the Board of Directors. There should be a formal process for training, updating and evaluating the performance of the members of the risk and investment committees, regarding the strategy and supervision functions that they must perform. These processes should include both members of management and the independent board members of the committee s .

The corporate governance committee or whoever acts as the administrators should establish criteria that encourage the composition of the committees to be consistent with the fulfillment of the strategy and supervision functions. Among the criteria, it should be evaluated that some of the members have relevant experience in either of the two functions, so that the committee can use their knowledge to strengthen them.[14] . In addition, the participation of those responsible for managing actuarial risks in investment and / or risk committees must be evaluated.

The investment and risk committees should define the way in which the information on the managed funds is presented to the different internal control bodies , which will depend on the particular conditions of each AFP, its structure and its own needs , complying with the principles clarity, comprehensiveness, significance and coherence over time. In the case of the fund s of des accumulation , the information should be presented in the form on the liabilities of the funds. In relation to accumulation funds , the information should be presented with respect to the objectives defined by the administrator for this type of funds. In any case, the minimum information presented for each type of fund should be focused on evaluating the performance and risks related to the value of a future pension benefit expected by the affiliates.

The actuarial area or whoever takes its place should be invited to the sessions to discuss the definition of the strategy when there are no representatives on the committee in which it is defined. Additionally, the committee in which the strategy is defined should clearly define the role of this area in defining the strategic assignment.

The committees should establish the issues that require the incorporation of other areas, such as the back office, in the discussions. The incorporation of these areas in the discussions is particularly relevant when evaluating the inclusion of new asset classes in the AEA.

Spaces should be fostered for feedback between investment, risk and action teams. These spaces can be organized outside of the investment and risk committees and should have a feedback approach from the teams in terms of global and specific risk trends that allow the risk / return analysis to be strengthened.

There should be a clear scheme for the incorporation of ESG defined by the Board of Directors , in which roles and responsibilities are identified , key tasks are defined and the necessary resources are assigned . E n this regard, managers should define the responsibility that will play the Board of Directors, the risk committee and the investment committee and the functions will Perf e Nar different areas of the organization involved in the different investment processes.

two. Asset selection and investment execution

This section reflects the conclusions of the discussion module on principles and best practices in asset selection and investment execution. In particular, the section addresses five main concepts associated with the asset selection and investment execution process, which are discussed in more detail later:

- First, the administrators should have a human team that is characterized by having a great diversity of professional experience and academic training in order to enrich the asset selection process and incorporate greater scope into the analyzes that support said process. In addition, technological tools should be incorporated to facilitate and complement the analysis of information for decision-making.
- Second, managers should evaluate whether it is appropriate to delegate the management of some asset classes within the managed portfolios . The decision must be based on a rigorous evaluation by the administrators in relation to their capacities. The guidelines established against management l as distint to s classes of assets should be consistent with both the management capacity of each manager as the investment objectives defined for each portfolio.
- Third, for those cases in which the administrators decide to delegate the management of certain assets, risk metrics should be implemented to carry out the corresponding follow-up. In particular, they should develop mechanisms of selection, monitoring and control differential asset classes to manage directly and those performed by delegation.
- Fourth, in the process of selecting assets and executing investments, as in the process of defining the AEA, the fund managers should incorporate ESG factors in the risk analysis . This implies considering how these matters may impact the performance of the assets that make up the portfolios. In particular, it is considered good practice to incorporate various sources of information and have different tools or strategies to collect and analyze information on these matters in the asset selection process .
- Fifth, the administrators should include the management of the A SG criteria in the exercise of their political rights . E exerting active ownership through political rights is a fundamental element of the fiduciary duty of the administrators. Therefore, the fund managers should design mechanisms to evaluate the performance in ESG matters and take advantage of the materiality analysis of the issuers that are part of the investment portfolios. In cases where managers delegate the management of a ssets to third parties, the performance in terms of exercise of political rights should be considered in the evaluation and selection of the administrator and / or manager.

2.1. Investment principles

Pension fund managers should have robust equipment and processes for the proper execution of investments and permanently assess the ability of these with respect to their functions . Particularly, for the asset selection process, the administrators should have a human team that is characterized by having a great diversity of experience and academic training, this in order to ensure that the decision-making process in the Asset selection considers different perspectives and is free from potential biases . To others , d eberían incorporate tools that facilitate the management and analysis of information (*ie* ., *Big-D ata* , artificial intelligence, data visualization, etc.).

In the general asset selection process, entities must evaluate whether it is pertinent to delegate the administration of some type / s of asset / s within the managed portfolios. This must be done from an approach to generating synergies between the third and the AFP, taking into account at least the experience and performance of the manager, his experience SPECS to market to delegate and a clear definition in terms of policies , limits risk , its monitoring and evaluation of the relevance of maintaining the delegation model . In principle, the delegation of one part of the portfolio management should not be restricted to any asset class. To the extent that the cost-benefit of this delegation is beneficial to achieve the pension objectives of the members, this delegation can be applied to any class of asset or market. It is important to include clear exit clauses for the AFPs, in cases where the delegation of portfolios does not achieve the objectives set.

Administrators should establish clear criteria with which to determine the way in which they will carry out the selection of assets and the execution of investments for each class of assets. In particular, these criteria should contain clear guidelines that define in which cases investment management should be carried out directly by the AFP teams and in which cases management should be delegated to a third party. The definition of these criteria should be based on a rigorous evaluation by the fund managers in terms of their capacities to adequately manage different classes of assets. In this sense, fund managers should develop an evaluation mechanism at the asset class level that considers both investment objectives and management capacity. Thus, the criteria determined for managing different asset classes should be consistent s with the capabilities of each manager and the goals .

Regardless of the delegation decision, the asset selection process , like the AEA, should be in accordance with the investment objectives defined for each portfolio. In accumulation funds, the selection of assets should mainly take into account the investment horizon and the pension benefit expected by the members. In the decumulation portfolios, the selection of assets should consider the future flows associated with the payment of pension benefits, for which it should incorporate variables such as life expectancy, family composition of the affiliates, among others. In any case, the asset selection process should always be aimed at contributing directly to the objective set, respecting the risk budgets defined for each portfolio.

Portfolio risk and performance metrics should also account for how the asset selection and investment execution process contributes to the achievement of defined objectives. In that order of ideas, the *performance attribution* analysis should also be carried out at the level of asset selection and investment execution and be complemented with the monitoring of indicators that allow identifying where the returns that are being generated or ceasing to generate come from. relative to what is established in the *benchmark* . In addition, managers should establish processes and tools for which the risk / return is incorporated n also factors ASG .

For incorporation of factors ASG in the process of selecting asset managers should have members of the team have the necessary technical knowledge. These members should be in charge of ensuring that they have the necessary information to be able to identify ESG risks and opportunities . In addition, c good Omo practice, managers should incorporate various sources of information in the analysis of ESG factors . This implies that fund managers should: (i) understand how robust, accurate, relevant and comparable the data they are using is and adjust their analyzes accordingly; (ii) have different mechanisms, tools or strategies, including those in which technological innovations are used, to collect information on ESG factors , this in order to have a more accurate analysis in the selection of assets and the execution of investments ; and (iii) rely on a materiality analysis so that the collection, analysis, and use of the information is efficient / optimal.

2.2. Principles riesg or

L at risk management level active s should be cascaded from the definition of the SAA, the ATA to reach to the individual case asset active. Similarly, the inclusion of new assets and / or risk factors must be carried out starting from the AEA, in order to incorporate the restrictions and / or pertinent policies in the investment process of the AFPs in the comprehensive risk management . E n line with the SAA, it should n perform risk analysis to less market risk, credit, A SG, actuarial, liquidity and duration [15] .

In case of choosing to delegate the administration of investments in certain assets and / or markets, the entity must have different and clear methodologies and metrics for both the delegated assets and those of its own administration. Therefore, even if the investment process is delegated to a third party, the entity must ensure that said process is fully framed within the objectives of the portfolios , and complies with the risk provisions (*middle-office)* of the entity. It is important to differentiate the risk metrics with which each of the processes will be monitored, due to the particularities that each one presents in its administration. In this sense, there should be differential selection, monitoring and control mechanisms for the asset classes that are selected and executed directly and those that are carried out through mandates to third parties or other investment vehicles. Said mechanisms must consider financial risks and non-financial risks.

Similarly, in cases where fund managers delegate asset management to third parties, the integration of ESG matters should be considered in the process of evaluating and selecting the administrator and / or manager . In that order of ideas, in the due diligence process, questions associated with the experience of third parties in ESG matters and the approach they have for the management of this type of risk in the process of selection of assets and execution should be incorporated. investment.

For asset selection, as in AEA, fund managers should incorporate ESG issues as risk factors. E l materiality analysis is central to incorporate matters ASG as risk factors in the selection of assets . For this reason, the fund managers should strive to have a materiality analysis , generally understood as the analysis of the relevant A SG risks and opportunities for a company, sector or country . Alternatively, fund managers should establish an ESG risk assessment and consideration process based on exercises carried out by third parties.

The incorporation of ESG criteria is aimed at analyzing risks and opportunities that may affect financial stability and the fulfillment of objectives of an issuer or counterparty . Therefore , l managers as they should begin to identify and take into account l or s approaches emerging for incorporating issues ASG in different asset classes and investment delegation. In fixed income, the integration of ESG matters can focus on helping to build on the traditional assessment of credit risk to determine possible defaults on future obligations . This can take place on a company-specific basis, but it can also apply to industry-wide trends that relate to issues such as climate risk. In equities, the integration of issues ASG can search the identified tion of material risks to the business , they not necessarily revealed through an analysis of the financial statements of the company and, and n are therefore not included in the price of its shares.

L as managers should include the issues ASG in the exercise of their political rights . Indeed, enforcing active ownership through the exercise of political rights is a critical element of the fiduciary duty of the administrators towards their affiliates. The AFPs should be ready to exercise active ownership collectively in cases where synergies can occur . E n cases where managers delegate asset management to third parties, assessing their policies and performance in terms of exercising their rights politicians must would be considered in the evaluation and selection of the administrator and / or manager.

2.3. Principles of C orporative Governance

Risk committees and / or investments should n Evaluates r periodically capabilities and performance of equipment for managing the investments of the po r tafoli or . This evaluation should be aimed at analyzing the capacities of the teams in the execution of operations, selection of assets, management of conflicts of interest and exercise of active ownership, among others. In the specific case of the selection of assets that the entity decides to delegate part of the management of its portfolio, the evaluation should focus on that the entity has processes suitable for tracking a delegate portfolio. The capacities can be evaluated by the teams themselves and presented to the committees based on the criteria that they define. Also, these committees should define the minimum standards of training plans and l a s structures i ncentivos equipment investment.

The committees should devise and propose to the Board policies for l to incorporating new asset classes s including the assessment of the capacity of the equipment for the analysis of assets and the implementation of strategies , risk analysis and the risk / return ratio as a minimum. And m i smo in e l analysis of new asset classes , the committee investment should establish the criteria based on which defin whether the selection of assets and / or implementation should be made directly or be delegated a third , in which case should be also set the met or gies of ries g or / return based on which the Seguim be performed i e nto .

Committees should establish methodologies to define thresholds risk ratio / return on each one to L as asset classes and likewise define the area responsible for its implementation. The implementation and execution of these methodologies may be in charge of the risk area or the investment area and must incorporate the characteristics of the different assets.

3. R evelación of information

Is a section reflects the conclusions of the module on the agenda for discussion in which standards and best practices regarding disclosure of information to members and the general public were discussed. The section highlights three general concepts, which are developed in detail later:

- First , the disclosure must would consider the heterogeneity that exists in the level of financial education of members. It should not be forgotten that members of the SGP are not necessarily investors with a high degree of knowledge of financial matters . In that sense, managers have for their members various information layers , each one at a different level of complexity , that will allow members to access the information according to their level of knowledge and understanding in the matter. The information that is published for the affiliate with a basic knowledge of the system (first layer) must be simple, free of technicalities, concise and easy to understand.
- Second , work must be done in a centralized repository, managed by the SFC , in which indicators are published that go beyond risk versus return measures, and that measure the quality of the service provided by each of the administrators . The objective is that the affiliates can compare and evaluate the administrators from a dashboard that includes a multiplicity of criteria.
- Third , administrators should migrate from a transparency approach to an approach that focuses on achieving the objectives of the information disclosure model. In this sense, the model should tend to generate knowledge in its members for decision-making , seeking that they become more active in decision-making and be evaluated in that sense . For these purposes , administrators should explore experimental methods in order to better target their financial education programs , evaluate the most effective mechanisms and encourage affiliates to assume a more active role vis-à-vis their pension savings.

3.1. Pr inciples and standards for r evelación information to members and to the general public

Administrators should define and publish risk and performance measures that are consistent with the different levels of financial education of their members. In any case, the regulation should establish what should be the minimum measures to be presented for each target audience . For all affiliates, fund managers should have portfolio performance and risk measures that are easy to understand and require little specialized knowledge in the matter. In addition, fund managers should have indicators available to those affiliates or stakeholders who have a higher level of financial education and who are interested in knowing more sophisticated risk and return indicators (*eg* , *Sharpe ratio* , dispersion of returns, *maximum drawdown* , volatilities versus returns) and define the way in which the different layers of information are presented in order to focus it on each type of affiliate.

As in the case of risk and performance indicators, for the publication of the investment and ESG policy[16] **, the administrators should also define what information to include and how to present it to their affiliates, taking into account the different levels of financial education and / or knowledge.** For all affiliates, the administrators should publish a simplified summary, maximum of one page, of each of these policies, in which the most relevant elements are highlighted. In the case of political ASG , the summary must would contain less its goal , the scope of application according to different asset classes, and must would have c er reference to the strategy of integration of the factors ASG. If you have a broader ESG , responsible or sustainable investment policy , this can be included in the investment policy and should be included in the simplified summary mentioned above . In any case, this must include at least the integration of factors ASG as risk factors .

Administrators should continue to use the NAV methodology to value their affiliates' shares in managed funds. However, as a good practice, the application of this methodology should be standardized taking as reference the GI P S. In addition to ensuring greater transparency for affiliates, standardizing the application of the NAV methodology would lead to the administrators being aligned with the best international practices in the field.

In the long term: L as managers should implement a worktable at the industry level in order to assess the appropriateness of implementing the Unit Annuity as a metric to evaluate the participation of members, this considering that it is expressed in terms of units of pension benefits, which will allow affiliates compares r your current situation versus its target pension .

Administrators should present indicators that allow affiliates to evaluate the performance of the portfolios in terms of expected benefits based on the parameters and / or criteria defined by regulation . In particular , it is considered good practice to present the probability of obtaining a target replacement rate based on your employment history and performance of the pension portfolio. This information should be included among the indicators that are presented to affiliates at a general level and should be easy to access and understand . The parameters of these measures should be defined by the supervisor in order to guarantee comparability between administrators.

The administrators should include in the periodic reports, together with the performance and risk measures, the concrete actions that the affiliate could take to improve their expected benefits. Periodic reports should encourage members to take concrete actions to improve their pension prospects, in light of the performance indicators presented. Ideally, the reports should allow the member to increase their voluntary contributions and show the effects of taking such actions on their expected pension.

Administrators should also adopt indicators that allow their affiliates to know the fulfillment of the goals set in the framework of the ESG policy . As a good practice, fund managers should disclose to the public at least the percentage of assets under management covered by policy A SG , the percentage of coverage of issuers and managers with an assessment of risks and opportunities in terms of ESG factors , indicators on compliance. goals and, where applicable or relevant, their exposure to climate risks. [17] . In any case, this disclosure must include reference to the assets that are covered under the ESG integration strategy . Regarding the active ownership, l a s Administrator to s should disclose their affiliates practices implemented to exercise it .

In addition to revealing measures of risk and performance of portfolios and the related information with the s policy s investment , managers should make público to s certifications that have been obtained by third parties, which endorse the robustness of their investment processes and suitability of technology and human talent that are part of é hese . The publication of these certifications should be centralized in a single repository managed by the SFC , in such a way that it allows affiliates to compare the fund managers from a perspective that goes beyond the risk and performance indicators of the portfolios and the investment policy. investment of these .

L to SFC should define indicators that measure the quality of the service provided by each of the managers and include in reports to the public , this in order that members can compare and evaluate managers from a board that includes a multiplicity of criteria. Said repository should contain indicators that measure the efficiency of the administrators in terms of pension recognition, consumer satisfaction with the advice they receive, availability of service channels and PQRs. Likewise, it should include indicators that allow a comparison between the commissions charged by the administrators to their affiliates (*ie* , commission costs versus returns or pension benefits obtained by the affiliates) .

3.2. Financial education for SGP members

L managers as they should migrate to an approach that, in addition to ensuring transparency, focus on capacity building in its affiliates , sufficient that they become more active in decision-making. In this respect, managers should use experimental methods and evaluations of quantitative and qualitative in order to understand how to better focus their financial education programs and how to encourage members to Asum a n a more participatory role against their pension savings. In addition, managers should explore successful international experiences in financial education and behavioral changes that can be adapted das and implemented with its affiliates. In financial education programs developed by administrators, emphasis should be placed on the meaning and importance of ESG factors .

3.3. Principles of Corporate Governance for the adequate disclosure of information

Administrators should clearly define the internal bodies responsible for defining and monitoring the suitability and sufficiency of the information disclosed to the public . The instances in which the suitability of the information presented is reviewed should include people related to investment processes and customer service processes. Additionally, these instances should periodically evaluate the relevance and sufficiency of the information presented.

Administrators should have clear information disclosure policies , defined by the Board of Directors and its support committees, which stipulate what information will be disclosed to members and through what mechanisms; this according to the different levels of financial education of the affiliates. As a good practice, the information that is disclosed to members periodically should also be presented for follow-up to the support committees of the Board of Directors. Regarding A SG matters , managers should strive to: (i) describe in a simple, clear and concise manner how such matters are taken into account in the investment strategy, so that affiliates can easily understand the philosophy or approach of the administrators in the handling of these matters; (ii) disclose the risks associated with the ESG factors to which the portfolios are exposed; (iii) taking into account the relevance of the physical and transition risks derived from climate change for the industry, they should describe how they manage these risks and how the investment strategy could be affected by an increase in global temperature and / or by the transition to a low carbon economy[18] .

Four. Conclusions

This document highlights a series of good practices and principles focused on strengthening the investment management of pension fund managers. Making he himself set off a collective exercise discussion with relevant industry players, which also participated multilateral institutions, authorities in other countries, academics, experts third parties, among others. The principles and good practices outlined in this document also incorporate the results of a review of the international literature, as well as the recommendations presented by the MMC and the analysis of the SFC team.

It is important to note at this point that the SFC considered it necessary to have a set of practices or principles that guide the investment processes of pension fund managers, in order to help the industry adapt to the standards observed at the level. international and anticipate potential regulatory changes arising from the recommendations of the MMC.

This allowed for a constructive dialogue to be established between industry players, reaching consensus on the roadmap that pension fund administrators should follow to strengthen their management in the future. Some of the most relevant aspects mentioned in the document are highlighted below .

- The multiplicity of stakeholders in the General Pension System adds a higher level of complexity to investment management. Consequently, proper management by the SGP administrators should start from a clear identification of the objectives and interests of the various stakeholders in the industry and identify which of these are aligned with the interests of the affiliates.
- Administrators should explicitly define the investment objectives of each of the accumulation funds based on the profiles of the affiliates. The investment objectives should be aligned with the expected pension benefits, which must be explicitly defined by the manager for each of the types of funds.
- Administrators should make use of long-term metrics that allow *pension-risk control* . In particular, the definition of risk budgets should be developed with the objective of mitigating *pension-risk* , understood as the possibility of not having the necessary assets to meet an objective path of pension benefits.
- L to risk management should be aligned with the objectives of affiliates, for which they should use risk budgets defined ex ante. In addition, fund managers should define dynamic thresholds for each risk factor in accordance with market conditions and the global risk budgets that have been defined.
- Administrators should integrate ESG matters into their risk management as one more risk factor. In particular, the administrators should have a clear scheme for the incorporation of ESG matters that is defined by the Board of Directors, in which roles and responsibilities are identified, key tasks are defined and the necessary resources are assigned.
- The investment decisions and the administration of the affiliates' resources should be made under the concept of a comprehensive portfolio. The principles should apply to the aggregate investment strategy and not to individual investments in isolation.
- In matters of corporate governance, the Board of Directors should clearly establish the functions of the risk and investment committees in matters of supervision and strategy, and should establish their criteria for formation, training and evaluation . Among the functions of the committees, the body that should establish the objectives of each of the funds should be clearly established based on the analysis of interested parties

with the support of the risk areas . The risk committee for its part should be in charge of defining risk budgets and appetites so that they are consistent with the objectives of each fund.

- The risk and / or investment committees should periodically evaluate the capabilities and performance of the teams for managing the portfolio investments. This evaluation should be aimed at evaluating the capacities of the teams in the execution of operations, selection of assets, management of conflicts of interest and exercise of active ownership, among others.
- In the general asset selection process, entities must evaluate whether it is pertinent to delegate the administration of some type / s of asset / s within the managed portfolios. The administrators should in any case establish clear criteria with which to determine the way in which they will carry out the selection of assets and the execution of investments for each class of assets.
- In case of choosing to delegate the administration of investments in certain assets and / or markets, the entity must have differentiated methodologies and metrics for both the delegated assets and those of its own administration.
- In terms of active ownership, the Administrators should establish clear policies for its exercise and for the evaluation of the managers for the types of investments that are considered to be delegated. Likewise, in the exercise of their political rights, the administrators should include the management of ESG factors .
- The disclosure of information should take into account the heterogeneity that exists in the level of financial education of the affiliates. L as managers should publish the information for members with varying degrees of knowledge and understanding in the matter and present it so that it is accessible to all members , but can be targeted according to the degree of knowledge of the affiliate . The information that is published for the affiliate with a basic knowledge of the system must be simple, free of technicalities, concise and easy to understand.
- In terms of financial education, the administrators should migrate from a transparency approach to an approach that focused on the generation of capacities in the affiliates, seeking that they become more active in decision-making. In this sense, administrators should explore experimental methods in order to better target their financial education programs and encourage affiliates to assume a more active role vis-à-vis their pension savings.
- Administrators should clearly define the internal bodies responsible for defining and monitoring the suitability and sufficiency of the information disclosed to the public. The instances in which the suitability of the information presented is reviewed should include people related to investment processes and customer service processes. Additionally, these instances should periodically evaluate the relevance and sufficiency of the information presented.

References

Brunel, J., Idzorek, T., Mulvey, J. (2020), CFA Institute: Principles of Asset Allocation.

Basel Committee on Banking Supervision (2015). Revised disclosure requirements for the Third Pillar.

Mantilla-García, D., Martinez-Carrasco, M., García, M., Muralidhar, A., From Defined-Contribution Towards Target-Income Retirement Systems.

Rigobón, R., De Bedout, R., Bernal, A., Galarza, R., Torres, J. & Jara, D. (2019). Final Report, 2019 Capital Market Mission.

Trujillo, M., Guzmán, A. & Prada, J. (2015), Boards of Directors in the Development of Corporate Governance .

Annexes

Annex 1. Stakeholder analysis

One of the main complexities of investment management of the General Pension System is a reflection of the multiplicity of stakeholders and objectives of these . For that reason, the Financial Superintendence considers that an analysis of the objectives of each one to of the stakeholders is a necessary condition to align the investment management of the fund managers with the objectives of key stakeholders.

Primary Stakeholder Goals :

- **Affiliates:** maximizes r the pension allowance and / or capital at the age pension for those who fail to meet the pension requirements. However, affiliates tend to evaluate performance and risks in the short term. In addition to maximizing the pension allowance, a significant percentage of affiliates aim to achieve at least a guarantee of a minimum allowance.
- **Administrators GSP:** maximizes r profitability and fulfilled r the minimum yield for the preservation of the managed resources . Strengthen its value offer to increase its affiliate base and thus increase its profitability and guarantee the sustainability of the business in the long term.
- **Public opinion** maximizes r profitability and eval ua r performance and risks in the short term.
- **Supervisor:** ensure that system resources are invested appropriately in relation to the objectives of the affiliates and the stability of the administrators.
- **Regulator:** generate incentives for the adequate administration of resources and fulfill the mission of the General Pension System.

Objectives of stakeholders secundari to s:

- **Capital market:** provide greater access to resources p ara issuers and wide r the funding possibilities for the productive sector of the country.
- **Society in general** : providing greater economic dynamism and raises r the standards of issuers.

As mentioned in the body of the document, the strategic management of the funds must be focused at least on the fulfillment of the objectives of the affiliates, since they are the main interested part of the system.

Additionally, two major conclusions can be drawn from the evaluation of the objectives of the interested parties:

1. In the first place, it is important to highlight the difference between the goal of maximizing allowance and the goal of maximizing returns, which, although they should be positively correlated, the search for each of them can significantly imply asset and risk management schemes. different.
2. Second, some secondary stakeholders, such as the capital market, are included in the list because the development of local markets can generate value for portfolios in the medium term, so that although it should not be one One of the main objectives of investment management can be considered at a strategic level.

This analysis leaves out targets various stakeholders that can be Consider a s e Included by the administrators to s in their strategic, tactical or execution of the same investment analysis. It is up to each manager to carry out their own stakeholder analysis to define how they can integrate and align their objectives and interests with those of the stakeholders.

Annex 2. ESG strategies in alternative or voluntary funds

Administrators should know, differentiate, select, implement and explicitly communicate which of the following strategies they are going to implement, among which are, but are not limited to, those described below :

i) Exclusion list of certain sectors, companies or practices based on specific ESG criteria ;

ii) *Best-in-class* or investment in sectors, companies or projects selected for a positive ESG performance relative to their industry peers;

iii) Filter based on minimum compliance with norms or standards defined and recognized at the international and / or national level;

iv) ESG integration or the systematic and explicit inclusion of ESG factors in the financial analysis of return risk;

v) Sustainability thematic investment or one focused on activities or assets directly related to ESG issues (for example, clean energy, green technology or sustainable agriculture);

vi) Impact investment or one that aims to solve social or environmental problems;

vii) Active ownership.

These strategies are not mutually exclusive and pension funds may use more than one strategy. In any case, it should be clear to the parties concerned the strategies used and not lose sight of the i NTEGRATION A SG, understood as the explicit and systematic inclusion of the factors ASG in the analysis and investment decisions, is Regard to the best practice in the context of this guide, as it is the way matters are identified, integrated and evaluated as risk factors to make an investment decision.

Annex 3. Materiality

The definition of materiality is based on a financial concept that involves focusing on information that, if omitted, could be expected to influence the decisions of investors or other interested parties or interest groups, as well as the sustainability and viability of the company. in the medium and long term. In that sense, the following can be identified:

Environmental and social (or stakeholder) materiality identifies material issues according to the impact that companies and their activities generate on the economy, the environment and society, which can imply both a positive and negative contribution to sustainable development. An example of this perspective is the environmental impact caused by a company in climate change, deforestation, loss of biodiversity or pollution of an ecosystem. In general, environmental and social materiality is in the public interest and is relevant to a broad base of stakeholders or interest groups, ranging from consumers, employees, suppliers, funders and investors to civil society organizations and communities, who are interested in understanding the impacts of companies in their environments.

Financial materiality recognizes the financial impacts generated by ESG matters in companies, in the broad sense of the generation / destruction of value and / or financial situation. An example of financial materiality is the implication that climate change causes or may cause in the future in the financial and operational performance of a company. This perspective is of particular interest to investors and other financial market participants, who require, in order to make investment decisions, to know and understand the risks and opportunities that A SG matters generate in a business. Among the main considerations of financial materiality are the incorporation of this information in the financial statements and the need for prospective approaches that allow quantifying these risks and opportunities in the medium and long term horizons.

There is a close interrelation between environmental and social materiality and financial materiality. Information on the underlying impact of companies' activities on A SG matters is crucial to identifying, assessing and understanding the risks and opportunities of A SG matters on companies. Regarding climate-related information, for example, TCFD has emphasized that indicators of greenhouse gas emissions are increasingly relevant for investors to understand not only the impact of companies on the climate but also the long-term value creation / destruction associated with climate risks and opportunities.

In this sense, the concept of **double materiality** has been developed and acquired preponderance to address both environmental and social materiality as well as financial. The European Commission, a pioneer in adopting this dual perspective, said that, to the extent that markets and policies evolve, impacts positive s / negative of a company on issues A SG will translate increasingly risks and opportunities materials financially.

Dynamic materiality refers to the fact that what is material today may not be material tomorrow and what is not material today may be material tomorrow. Over time "triggers" appear that make some issues become material, which can happen gradually, as has happened with climate change and gender diversity, or quickly, as with plastics in the oceans or the same Covid-19. Consequently, defining which topics are material requires a long-term vision of the future and a proactive materiality approach.

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[2] See in Annex 1 the analysis of the stakeholders of the GSP.

[3] The discussion process included the four administrators of the Individual Savings Scheme, as well as Caxdac and Colpensiones as administrators of the Average Premium Scheme. Colpensiones is also the administrator of the Periodic Economic Benefits program (BEPS). Representatives from Asofondo s also participated in the process and there were presentations by special guests such as the World Bank, the OECD, BlackRock, Mercer, PIMCO, D3P Global , Risk m athics Financial Institute , the Superintendency of Pensions of Chile, the Central Bank of Holland , among others.

[4] See Rigobón et al (2019).

[5] See Basel Committee on Banking Supervision (2015).

[6] Annex 1 presents an analysis of the objectives and interests of some of the most relevant stakeholders.

[7] Pension benefits can be a pension allowance or the return of balances. In this sense, the fund managers should establish which is more suitable as the objective of the accumulation funds.

[8] Understood as funds that have not been defined as default elections established in the regulation.

[9] See Kemp 6.5-6.8, MHD; Patel, CC (2011).

[10] Pension Risk and Risk-Based Supervision in Defined Contribution Pension Funds. World Bank (2014).

[11] Investing in a time of climate change, Mercer. https://www.mercer.com/our-thinking/wealth/climate-change-the-sequel.html

[12] Physical risks may arise from climate - related events such as floods and storm s . These can be acute or chronic. Transition risks are those derived from the transition to a low-carbon economy and may arise from technological changes, the implementation of public policies, and market dynamics.

[13] It is important to note that the Financial Superintendency and 2DII conducted two relevant studies on this front: an analysis of the exposure of mandatory pension portfolios to transition risks and climate stress. The first exercise revealed that there is a possible

exposure to transition risks in the corporate equity and bond portfolio. Results of the 2DII study available upon request .

[14] Trujillo et al (2015) present an evaluation of the impact of some of the characteristics of the members of the Board of Directors that can be extrapolated to the committees.

[15] For the specific case of the Conservative and Scheduled Retirement portfolios.

[16] It is important to note that , within current good practices, fund managers include references to the ESG policy within the investment policy.

[17] In accordance with TCFD recommendations , organizations exposed to climate-related risks should consider: (1) using scenario analysis to inform their strategy and financial planning processes and (2) disclosing the resilience of their strategies in the face of a series of related plausible scenarios. This ú latter is what in e gu sta í us refer to the "result of the stress test or analysis and scenarios".

[18] This good practice is in line with the recommendations made by the FSB's *Task Force for Climate Related Financial Disclosure , TCFD* .