COMMUNICATIONS

AUDIT SUMMARY REPORT ON POSTALIS

This audit aimed to deeply analyze the facts that increased the accumulated deficit in the investment funds in which Postalis participates and to investigate the responsibilities for this scenario. The volume of audited resources reached the sum of R$ 2,730,380,000.00. This sum represents the resources invested in the funds selected in the audit.

Among the estimated benefits of this audit is the TCU's performance in the audit of investments in pension funds: the total quantifiable benefits of this audit reached **R$ 1,076,293,373.63**.

Overview of the Object

Postalis is the name for Postalis Instituto de Previdência Complementar (Postalis Institute for Supplemental Retirement Plans), which aims to institute, manage and execute plans of retirement benefits. Its main sponsor is the Brazilian Post and Telegraph Corporation, also called Correios. This institute was created in 1981 to provide supplemental benefits to the governmental social insurance of Correios's employees. Postalis's resources derive from the contributions of sponsors and insured individuals. These resources are invested, and their return results in savings that pay benefits to employees.

Method

Studies were carried out in compliance with TCU's Auditing Standards and Standards for Compliance Audit.

The selection of objects focused on Postalis's investment cases previously investigated by other organizations, especially those highlighted by the Parliamentary Commission of Investigation (CPI) on Pension Funds, such as the performance of BNY Mellon at Postalis, the bank BVA, Atlântica I and II (FIDEX), the sugar and ethanol mill Canabrava, Cajamar, Galileo, FIDC Trendbank, and FIP Multiner.

The methodology mainly approached the finance theory, particularly the investment portfolio theory (portfolio theory). The theoretical framework used to calculate the damage to Postalis is presented in the findings "Damage to Investments in the Serengeti Multimarket Investment Fund in Shares of Investment Funds (FIC FI Multimercado Serengeti)"; "Damage to Investments in the Funds BNY FIC FIDE and Brasil *Sovereign* II"; and "Damage to Investments in the Investment Fund in Credit Rights (FIDC) Trendbank".

The basic principles of the modern portfolio theory were presented and later detailed by Harry Markowitz in 1959. Although this theory was proposed more than 50 years ago, most studies on portfolio management have concentrated on methods to implement this basic theory. Advancements regarding this implementation are recent, and only their contribution can promote the applicability of the portfolio theory.

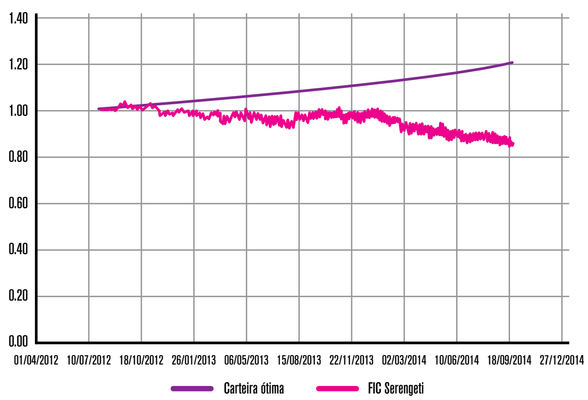
The modern portfolio theory studies the mean-variance space. It means, the **space expected return x standard deviation** is the interest of portfolio analysts in the market. This space establishes the concept of efficient frontier for resource allocation: a set of preferable portfolios to all risk-averse investors who also opt for higher returns; in other words, a set of investments that offers a higher return for the same risk, or that offers a lower risk with the same return.

TCU's Main Findings

1. Damage to Investments in the Serengeti Multimarket Investment Fund in Shares of Investment Funds (FIC FI Multimercado Serengeti)

Some operations in the Serengeti Multimarket Investment Fund in Shares of Investment Funds (FIC Serengeti) did not comply with the institute's investment policy (art. 9 of this fund's Regulation), neither with art. 4 of the Resolution CMN 3792, as of September 24, 2009, neither with art. 65 and 65-A of the Instruction CVM 409, as of August 18, 2004. This noncompliance resulted in a damage to Postalis (only shareholder of this fund) of R$ 454,514,596.30 in many base dates. The damage calculation resulted from the difference of return between FIC Serengeti and a counterfactual scenario that would have complied with the investment policy. This counterfactual scenario was based on the portfolio theory, which resulted in an optimal portfolio. The graph below illustrates the result.

FIC Serengeti Shares x Counterfactual Shares (Optimal Portfolio)

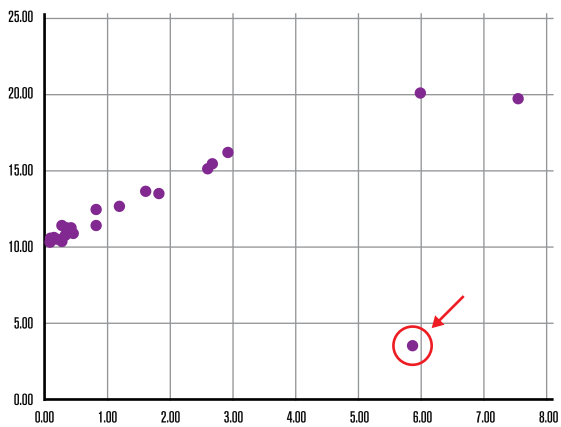


FIC Serengeti's investment portfolio should present shares of funds with a good, continuum risk/return background. It means, it should have shares of funds with high return and low risk, high return and high risk, or low return and low risk, according to the manager's criterion. Therefore, this fund should **never have funds with a low-return-high-risk background**, because it violates the provision of art. 9 of the fund's Regulation and, from a more general point of view, the common and fair market practices, i.e. the portfolio theory (based on historical data) and the fiduciary duty (since no professional portfolio manager would accept to take higher risks for a lower return). Article 9 of FIC Serengeti's Regulation means, in other words, the necessity to form an optimal portfolio based on historical data – the framework of this audit. This optimal portfolio is the necessary counterfactual condition to calculate the damage to Postalis. Here is the core of the analysis conducted in the audit.

The historical data of more than 10,000 funds – a universe that includes all authorized funds in the Brazilian market – provided the necessary elements to form an optimal portfolio (counterfactual condition) of shares of investment funds to compare with FIC Serengeti's portfolio. Then, we selected the eligible funds to be in the portfolio.

In order to compare FIC Serengeti (the lowest point in the graph) with similar funds in the market, we plotted in the following graph the points risk (horizontal axis) and return (vertical axis) for all funds selected, considering historical data from January 1, 2009 to August 1, 2012. The optimal portfolio's funds are closer to the left side of the graph.

Risk x Return for All Funds in Table 2, from 2009 to 2012



Source: Economatica

Considering the risk taken by FIC Serengeti's portfolio (close to 6), one of the funds presented an average annual return of 20% (Fundo Gavea Macro), while FIC Serengeti's portfolio had an average annual return lower than 5%. In addition, a fund with risk close to zero (based on public securities – LFT – Financial Treasury Bills) presented a return of 10%, while FIC Serengeti's portfolio presented a return lower than 5% with risk close to 6. These data were publicly available on August 1, 2012; they are based on the background of shares of funds from January 1, 2009 to August 1, 2012.

These data show that FIC Serengeti's manager did not act to increase the value of the shares he/she issued based on an investment policy that chooses **funds with a good, continuum risk/return background**, which violated art. 9 of the fund's Regulation. This situation becomes worse when considering the massive difference between the risk/return relation of FIC Serengeti's portfolio and other portfolios in the same market.

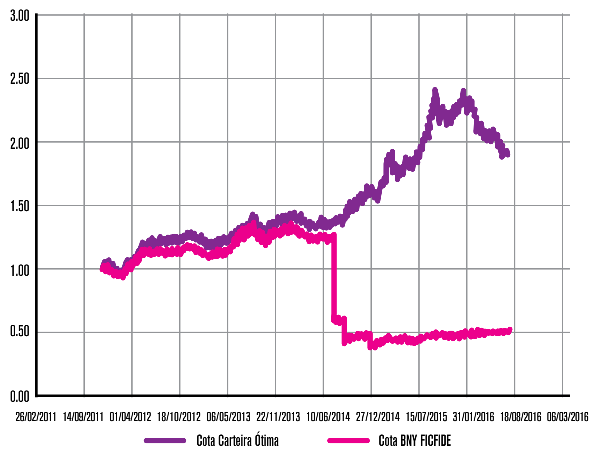
Due to the damage identified in this fund, we proposed a joint notification between Postalis's Executive Board and FIC Serengeti's Bond Trustee.

1.1 Damage to Investments in the Funds BNY FIC FIDE and Brasil *Sovereign* II

Some operations in the BNY Mellon Investment Fund in Shares of External Debt Investment Funds (BNY FIC FIDE) and Brasil *Sovereign* II External Debt Investment Fund violated the investment policy of these funds, as provided for in art. 4 of the Resolution CMN 3792, as of September 24, 2009, and in art. 65 and 65-A of Instruction CVM 409, as of August 18, 2004, which resulted in a damage to Postalis (only shareholder of these funds) of R$ 425,507,684.20 on the base date of July 26, 2016.

The damage calculation resulted from the difference of return between the fund BNY FIC FIDE, which has 100% of its equity invested in the fund Brasil *Sovereign* II, and a counterfactual scenario that would have complied with the investment policy of the funds analyzed. The graph below illustrates the result.

Comparison between Shares of the Counterfactual Scenario (Optimal Portfolio) and of BNY FIC FIDE

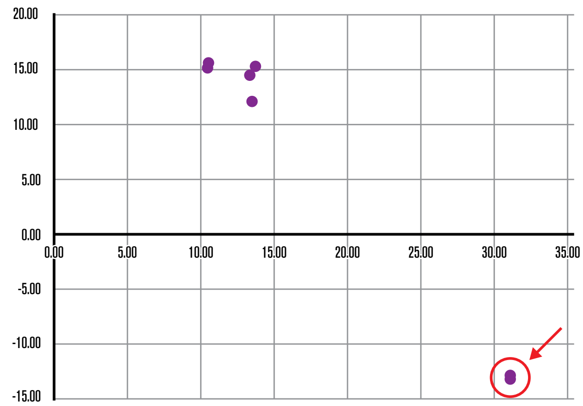


Source: Economatica

The noncompliance with art. 8 of Brasil *Sovereign* II's fund Regulation caused substantial damage to Postalis, mainly due to the sharp drop in the value of the fund share between 2014 and 2015 – when losses due to the depreciation of two UBS Warburg's Certificates of Deposit became known. The damage calculated on the base date of July 26, 2016 was R$ 425,507,684.20, based on the comparison of performance between BNY FIC FIDE and a counterfactual scenario of compliance with Brasil *Sovereign* II's fund Regulation. The counterfactual scenario indicates the performance of BNY FIC FIDE after December 1, 2011 if it had complied with art. 8 of Brasil *Sovereign* II's fund Regulation.

In order to facilitate the interpretation of data, we plotted a risk/return graph with similar investment funds used in the comparison. The funds BNY FIC FIDE and Brasil *Sovereign* II are the lowest points in the graph.

Risk x Return for All Funds in Table 14, from December 1, 2011 to July 26, 2016



Source: Economatica

The risk/return data in the graph above show that BNY FIC FIDE presented the worst return and the worst risk among all funds studied. This fact could not be different because the investment portfolio of BNY FIC FIDE (100% Brasil *Sovereign* II) was already ruinous on December 1, 2011 according to the historical data available at that time.

The return of the fund BNY FIC FIDE between December 1, 2011 and July 26, 2016 was of -48.7%; the return of the optimal portfolio in this same period was of +92.0%. Therefore, the damage to Postalis was of R$ 425,507,684.20 on the base date July 26, 2016. It is the result of multiplying the equity of the fund on December 1, 2011 (there was no significant net capital raising in this period) by the difference of return between the fund and the optimal portfolio (+92.0% - -48.7% = +140.7%). In other words, we calculated the damage to Postalis as the difference of earnings between the fund BNY FIC FIDE and the optimal portfolio (counterfactual scenario) set in the audit.

Due to the results found, we proposed a joint notification of this value between Postalis's Executive Board and the fund's Bond Trustee.

1.2 Damage to Investments in the Investment Fund in Credit Rights (FIDC) Trendbank

In an Investment Fund in Credit Rights (FIDC), also known as Receivables Investment Funds, most of resources invested by shareholders are used to buy negotiable instruments of operations conducted in the financial, commercial, industrial, real state, mortgage, commercial lease and service provision sectors.

On March 2010, Postalis bought five thousand second-series shares of the Investment Fund in Credit Rights Trendbank Banco de Fomento (Development Bank – FIDC Trendbank), a total of R$ 50,000,000.00.

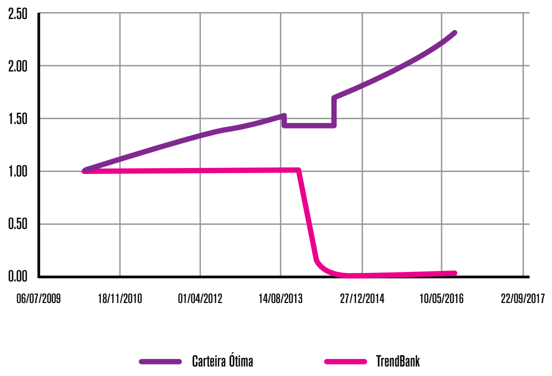
In the end of 2013 and throughout 2014, Trendbank's shares strongly depreciated due to nonpayment of almost the whole portfolio, which resulted in a loss higher than 95% of the value initially invested.

Optimal Portfolio

Considering the basic financial principles and the common and fair practices of the market (to optimize the risk/return relation based on historical data) mentioned in the previous findings, the optimal portfolio initially consisted of 58.28% of the asset Quata FIDC Sub and 41.72% of FIDC F Multisegmentos Senior. Percentages varied according to changes in the risk/return relation of assets.

Then, we relatively compared the performance of the optimal portfolio with the FIDC TrendBank's performance. The graph below shows the results. We considered that R$ 1.00 was hypothetically invested in the FIDCs of the optimal portfolio on April 30, 2010 as opposed to the same R$ 1.00 invested by Postalis in FIDC TrendBank.

Relative Comparison of Performance (in R$) between the Optimal Portfolio of FIDC and FIDC TrendBank – April 30, 2010 to August 1, 2016



Source: Data from Economatica arranged by the audit team

The good performance of the optimal portfolio of FIDCs was diametrically opposite to Postalis's investments in the FIDC TrendBank, which proves the drastic depreciation of the shares of this fund due to the aforementioned reasons.

Calculation of the damage to Postalis regarding the investments in FIDC TrendBank

The return of the fund FIDC TrendBank between April 30, 2010 and August 1, 2016, considering the value of shares, was of -97.86%; the return of the optimal portfolio in the same period was of +133.05%. Therefore, the damage to Postalis was of R$ 159,471,000.00 on the base date August 1, 2016. It is the result of the difference of return between the shares of the fund and the optimal portfolio multiplied by the equity of the fund in the same period based on historical data. In other words, we calculated the damage to Postalis as the difference of earnings between the fund FIDC TrendBank and the optimal portfolio (counterfactual scenario).

Due to the results found, we proposed a joint notification of this value to Postalis's Executive Board.

Other studied cases

In addition to the cases highlighted here, the audit reported other smaller findings.

TCU Deliberation

Decision: 630/2017 plenário
Date of session: 04/05/2017
Rapporteur: Ministro Vital do Rêgo
TC: 012.230/2016-2
Unit Charge: Department of External Control - Social Security, Labor and welfare