FIAP

FEDERACION INTERNACIONAL DE ADMINISTRADORAS DE FONDOS DE PENSIONES

PENSION NOTES

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Impact of withdrawals from Chilean pension funds on the economy and individuals

Executive Summary

Pension fund withdrawals should always be a last resort. However, three have already been approved in Chile to date[1] , despite the fact that organizations such as the OECD have recommended that they should not be used for providing financial assistance. If used, they must meet three requirements for minimizing damage. First, means testing, i.e., allowing their use only by those in urgent need. Second, tax neutrality,i.e., the withdrawal must not be associated with any tax benefit, in order not to encourage withdrawals. And third, replenishment, i.e., seek mechanisms to replace the withdrawn funds and not affect pensions. Chile is one of the few countries in the world in which none of these requirements, except for tax neutrality in the second withdrawal, have been met.

A detailed analysis of the health, economic and social variables, on the other hand, does not validate the logic of an additional withdrawal. If this measure is approved, there would be a total number of 5.6 million members with no balance in their accounts, equivalent to 50% of the total number of members in the system. As a result of the three previous fund withdrawals, 3.8 million people had zero balances in their accounts at some point.

Young members have withdrawn particularly high amounts, which is worrying considering that 43% of the pension is built in the first 10 years of working life.

After the three withdrawals from the pension funds, men's balances decreased by 24.3% and women's by 33.3%. This means that, in order to recover the fund levels prior to the withdrawals, men and women would have to contribute for an additional 5.6 and 6.3 years, respectively.

The three fund withdrawals have also had an impact on rising inflation, which has a strong impact on prices and the payment of workers' mortgage loans. It is also highly regressive, since it hits the budgets of the poorest families harder. Added to the above, is the strong impact on the local capital market due to the forced liquidation of a large volume of assets, which also generates an increase in interest rates for all types of loans and terms. This has also caused a negative return in the pension funds with greater exposure to fixed income (funds D and E), triggering significant switches in enrollment from the more conservative fund (E) to other riskier funds, making the loss of value of fixed income instruments effective.

It is important to emphasize that the rejection of new withdrawal initiatives is key to improving the performance of the more conservative funds. In fact, since it became evident that the fourth withdrawal bill of law could be rejected, the Fund E returns (the most conservative) were always positive.

[1] The Chamber of Deputies recently rejected a 4th withdrawal project. Given the failure of this legal initiative, some political sectors will be insisting on a 5th withdrawal, but its success is unlikely.

Thus, its weekly moving average rose by 6% between that date and November 11. This shows the positive aspect of the pension funds being used for the purpose they were designed for: to pay pensions.

Another impact of the withdrawals is their negative effect on citizens in the mortgage market: higher cost of financing (interest rate increases by almost 1.7 percentage points), shorter loan payment terms (30 to 15 years), higher income required for access, and a higher down payment (from 20% to 30% of the value of the property). The combination of higher interest rates and income for accessing loans limits the access to housing of thousands of families, mainly affecting middle and low-income households, adults with low savings capacity and young people with short working lives. For families with borrowing capacity, it would entail critically raising their financial burden, which, according to simulations, could increase by up to $Ch 3.9 million per year (considering the payment of a higher dividend and consumer loan to finance part of the higher down payment), which is equivalent to stating that households should use an additional 21.5% of their income to offset the effects of fund withdrawals.

On the other hand, in the 3rd and 4^{th} (rejected) withdrawals, the Law envisages 1st and 2nd advances of Life Annuities (LA). These advances generate impacts similar to those of pension fund withdrawals. However, by affecting the reserves of the Life Insurance Companies (LICs), particularly in the second advance, their solvency is put at risk and therefore the payment of pensions to almost 660 thousand life annuity pensioners and other beneficiaries of insurance. There is no other country in the world that has forced changes to life annuity contracts as part of its response to Covid-19.

The Chairman of the Chilean Central Bank (BCCh), Mario Marcel, has pointed out that the effects of pension withdrawals could be non-linear, cumulative and increasingly irreversible, and that the associated costs will rise, to the extent that withdrawals put pressure on inflation, and the risk of disruptions in the financial market increases. In a scenario of crumbling expectations and structural changes in the financial system, the measures applied by the Central Bank to reduce the impacts on the market are losing effectiveness, affecting the evolution of the economy and the well-being of the population in coming years, he explained.

I. Pension fund withdrawals: design, characteristics and distribution of funds to date

I.1 Design of the withdrawals

Three pension fund withdrawals have been approved in Chile to date. International organizations such as the OECD have pointed out that pension funds should not be used to provide financial assistance in times of crisis, but rather that such assistance should come from governments, due to which withdrawals should always be a last resort. Hence, withdrawals must meet three conditions to minimize damages:

- **Means Testing:** Only allow withdrawals of savings by those who need them with some degree of urgency.
- **Tax neutrality:** The early withdrawal of funds should not be associated with a tax benefit, since this would encourage people to withdraw their funds, even if they do not need them.
- **Replenishment:** Mandatory fund replenishment mechanisms must be put in place, so as not to defeated their purpose of paying pensions.

As can be seen in Table 1, Chile is one of the few countries in the world that does not comply with any of these three fund withdrawal conditions, except for tax neutrality in the second withdrawal.

Table 1.- Comparison of pension fund withdrawal bills of law in Chile

	First withdrawal *	**12. Second withdrawal**	**Third withdrawal**
Eligibility	Universal (assets and liabilities with Programmed Withdrawal)	Universal**	Universal**
Authorized amounts	10%,with a maximum of UF 150 and a minimum of UF 35 (or the lower available balance)	10%,with a maximum of UF 150 and a minimum of UF 35 (or the lower available balance)	10%,with a maximum of UF 150 and a minimum of UF 35 (or the lower available balance)
Taxes	No	Yes (only for taxpayers whose annual taxable income is equal to or greater than 30 UTA (Annual Tax Unit)	No
Compensations	No	No	Option of increasing contributions by 1 pp and government contribution for each year the pension is postponed

* The deadline for requesting the first withdrawal was July 21, 2021. ** Except authorities, Art. 38 bis.
Source: Chilean Central Bank

I.2 Health, economic and social environment

The health situation variables (active cases, hospitalizations and mobility) were very different at the time of each withdrawal. Similarly, the economic variables (IMACEC[1], consumption or employment situation) do not seem to be factors that explain the decision to authorize these withdrawals (see Table 2).

Thus, a new withdrawal project would be presented in a completely different context, in health, as well as economic and social terms.

[1] Monthly Economic Activity Index.

Table 2.- Economic and social health situation at the time of each withdrawal

	First withdrawal	Second withdrawal	Third withdrawal	Fourth Withdrawal (rejected)*
Health Situation	Assets: 18,863. ICU Covid beds: 1,445	Assets: 17,178. ICU Covid beds: 663	Assets: 58,830. UCI Covid beds: 3,376	Assets: 5,676. UCI Covid beds: 379
Mobility (% of population in quarantine)	55%	6%	85%	0%
IMACEC level vs. Pre pandemic	-12.90%	-1.90%	1.90%	5.70%
Level of consumption, sales vs. pre pandemic (IACM2)	-18.10%	8.20%	0.10%	32.30%
Employment situation	Employment rate: 45% Formal AFP salaried employment (vs. pre-pandemic): - 568 thousand Unemployment rate: 12.5% Salaries: 2.8%	Employment rate: 50.8% Formal AFP salaried employment (vs. pre-pandemic): - 194 thousand Unemployment rate: 11% Salaries: 4%	Employment rate: 51.1% Formal AFP salaried employment (vs. pre-pandemic): +70 thousand Unemployment rate: 10.4% Salaries: 5.8%	Employment rate: 51.8% Formal AFP salaried employment (vs. pre-pandemic): .+126 thousand Unemployment rate: 8.4% Salaries: 6.4%

Source: Chilean Central Bank
* Data as of October 12, 2021.

I.3 Characteristics of the withdrawals

According to Chilean Pensions Commission data (SP), the three effective withdrawals entailed a total disbursement of USD 49,706 million (if a new withdrawal is approved, the amount could rise to USD 66,594 million), approximately 29% of the funds available as of March 2020, when the withdrawals began. According to the Pensions Commission, this amount is equivalent to almost eight times joint public expenditure in the solidarity pillar and the former PAYGO system in 2020.

The number of citizens who made at least one fund withdrawal was 11,070,591 (see Table 3), and only 1,496,356 made no withdrawals.

As a result of the three fund withdrawals, 3,859,713 individuals (35%) had zero balance at some point and 1.6 million of them have continued contributing. If a new withdrawal is approved, there would be a total of 5,611,477 members with no balance, equivalent to 50% of all enrolled members.

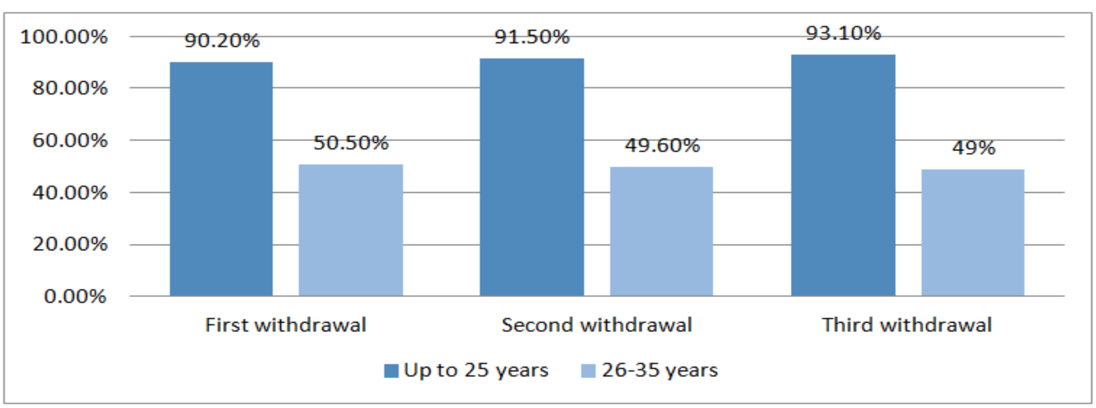
The amounts withdrawn by younger members are particularly high (see Graph 1), which is worrying because the higher informality and unemployment rates in this age group make it difficult to recover their pension savings. This is aggravated if one considers that 43% of the pension is built in the first 10 years of working life, according to estimates by the Chilean Association of AFPs.

Table 3.- Requests and amounts of the respective withdrawals

	First withdrawal	Second withdrawal	Third withdrawal
Applications accepted	11,107,255	9,076,134	7,552,046
Average amount withdrawn (pesos)	1,423,011 (USD 1,758)	1,456,909 (USD 1,800)	1,482,030 (USD 1,831)
Total amount withdrawn (millions of USD)	19,668	16,236	13,782

Source: Chilean Pensions Commission.

Graph 1.- Withdrawal amounts requested by younger members, as a percentage of the balance

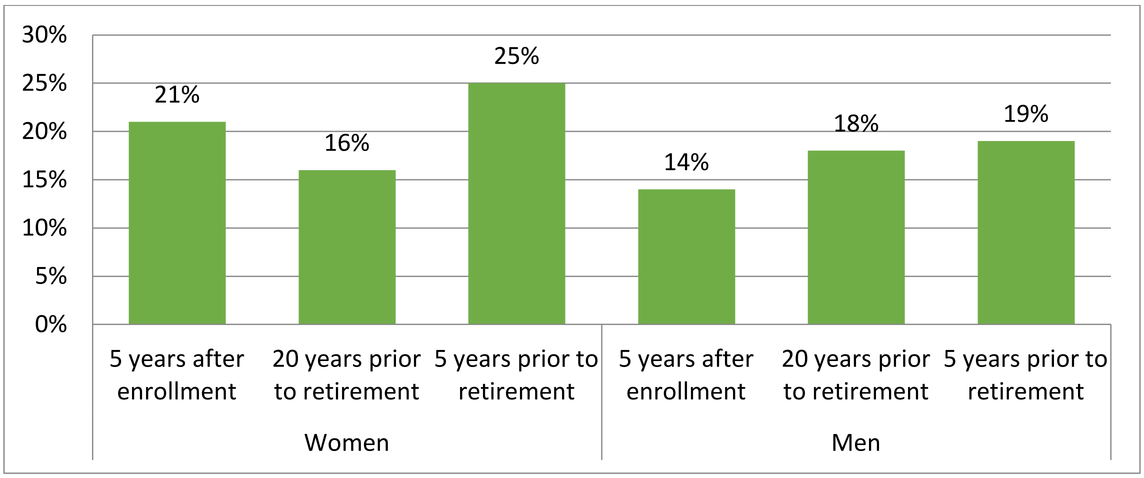


II. The impact of pension fund withdrawals on the economy and individuals

II.1 Lower pensions

The most direct effect of fund withdrawals on individuals is the reduction in their pension amounts. Graph 2 shows that these withdrawals affect women to a greater extent than men, and that pension reductions will, in general, be greater closer to retirement age.

Graph 2.- Reduction of the self-financed pension as a percentage of the average salary by years of membership and sex after three fund withdrawals



Source: Chilean Pensions Commission.

Likewise, Table 4 shows that the reduction in the balances of men will be 24.3%, and the balances of women 33.3%, after the three pension fund withdrawals. This means that, in order to recover the funds prior to the withdrawals, men and women would have to contribute for an additional 5.6 and 6.3 years, respectively. In all, it is estimated that the withdrawals will require an average increase of 5.9 years in the retirement age to offset their effects.

Table 4.- Reduction in average balance and average additional contribution time to recover balances after three fund withdrawals

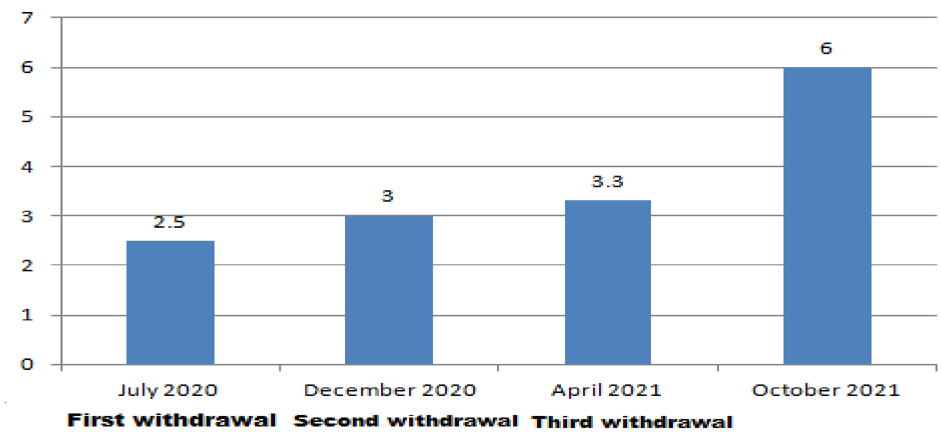
	Reduction in balance at the retirement age (%)	Additional number of years of contribution to recover the balance prior to the first withdrawal
Men	24.3	5.6
Women	33.3	6.3
Total	28.5	5.9

Source: Chilean Pensions Commission.

II.2 Higher inflation

The annual variation of the Consumer Price Index (CPI) in October 2021 was 6%. As can be seen in Graph 3, the trend in the variation of the CPI has been increasing over time, since the fund withdrawal process began in July 2020.

Graph 3.- Consumer Price Index (CPI) - Annual variation

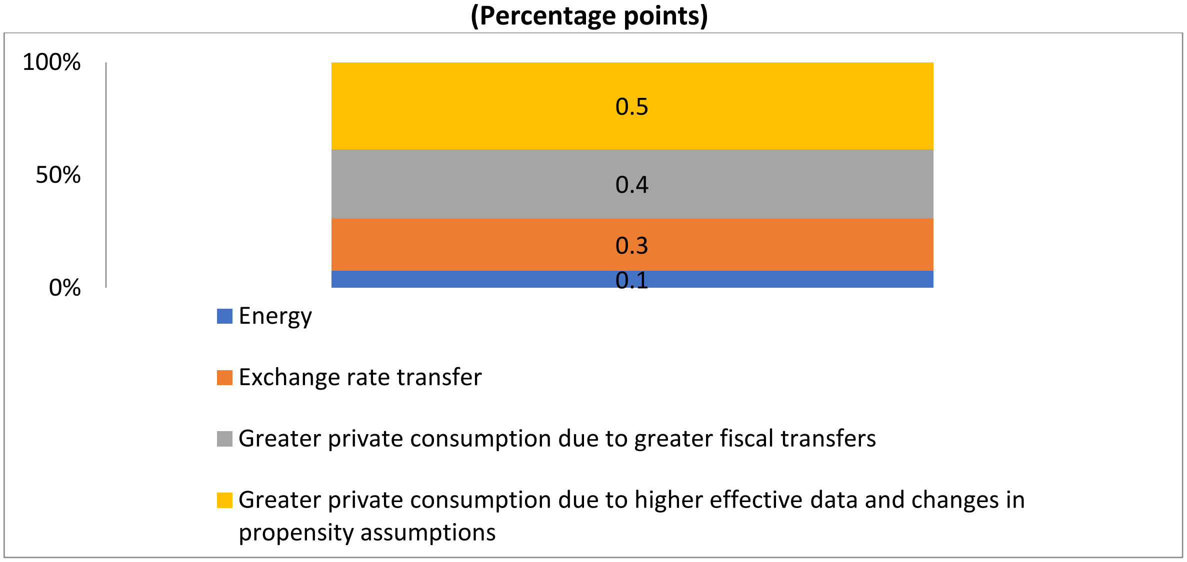


Source: FIAP, based on Chilean Central Bank data.

These variations in the CPI are very relevant, since they impact on the value of the Unidad de Fomento (UF; index that evolves in accordance with the previous month's inflation), which will exceed $ 30,800 (approx. $ 37) this year. This variation severely affects prices and the payment of workers' mortgage loans. Furthermore, it is highly regressive since it proportionally affects the budgets of the poorest families more.

According to the Chilean Central Bank, the entire increase in inflation projected for 2021 (from 4.4% to 5.7%) is explained by higher consumption and the depreciation of the peso (see Graph 4), both influenced by the three previous pension fund withdrawals and the expectation of additional withdrawals.

Graph 4.- Factors affecting projections of inflation as of December 2021 (2)
(Percentage points)



Source: Presentation by Mario Marcel, Chilean Central Bank (October 13, 2021).

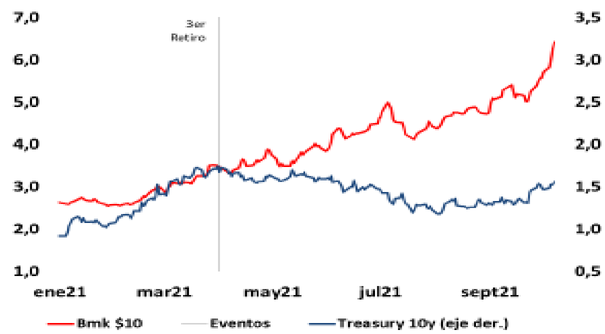
(2) Constructed considering the projection for inflation of the total CPI of the June and September 2 021 monetary policy reports. Sources: Chilean Central Bank and National Institute of Statistics.

II.3 Higher interest rates

The massive pension fund withdrawals have triggered a deterioration in local capital market conditions, due to the forced liquidation of a large volume of assets, which reduces the depth of the capital market. This, in turn, causes local interest rates to increase over all terms and in all types of loans.

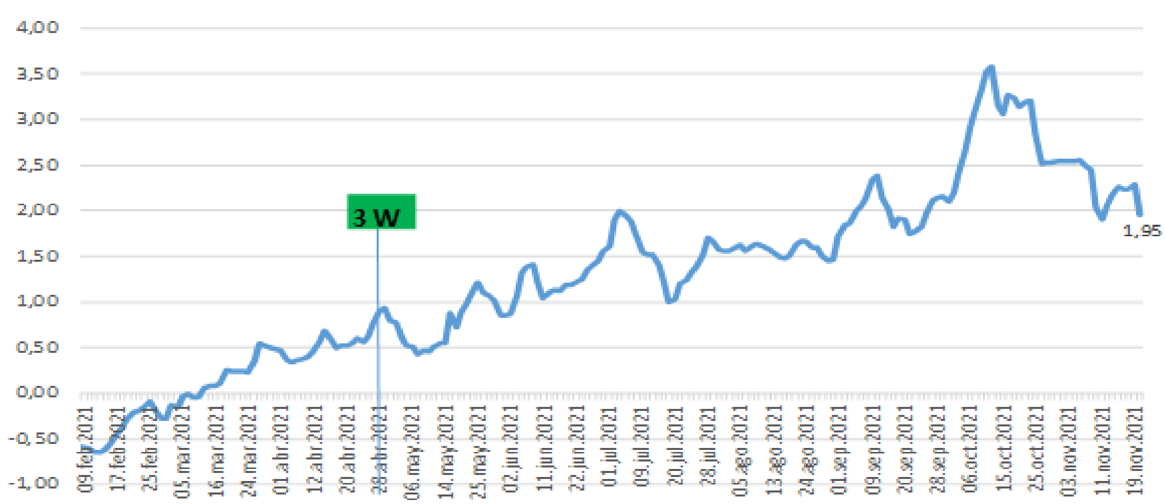
According to the Central Bank, there has been a reduction in long-term Central Bank bond rates at 10 years compared to international benchmarks (US Treasury 10 years; see Chart 5), especially after the third withdrawal. Graph 6 shows that the interest rate on 10-year treasury bonds increased by 246 basis points between January and November 22, 2021. Mortgage interest rates have especially reflected these effects (see section II.7 below).

Graph 5.- Interest rate on Central Bank bonds in pesos at 10 years and US treasury at 10 years (percentage)



Source: Presentation by Mario Marcel, Chilean Central Bank (October 13, 2021).

Graph 6.- Interest rate on Central Bank bonds in UF at 10-years (%)

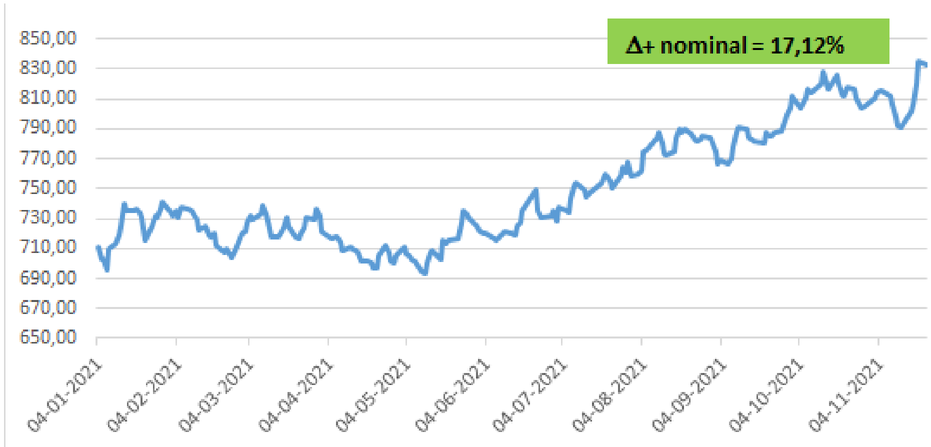


Source: FIAP, based on Chilean Central Bank data.

II.4 Higher exchange rates

The US dollar has steadily risen since May 2021, which means that the Chilean peso has lost value (depreciation). The value of the dollar has increased by 17.12% in nominal terms this year (see Graph 7). This affects the prices of all imported goods.

Graph 7.- US dollar exchange rate 2021



Source: FIAP, based on Chilean Central Bank data.

II.5 Fiscal impairment

The three pension fund withdrawals have deteriorated the Chilean government's fiscal position, for three fundamental reasons.

In the first place, income tax was levied only on the second of the three withdrawals, with the first and third withdrawals being tax-free, entailing an immediate fiscal cost.

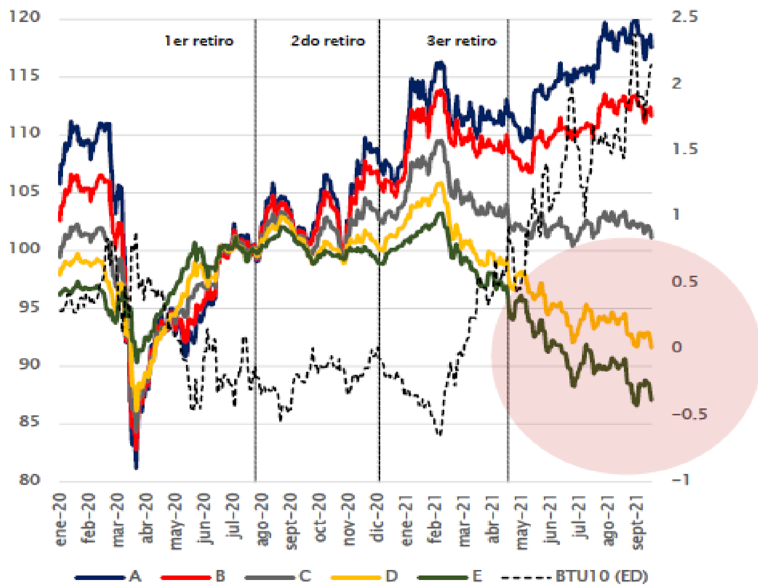
Second, almost four million people used up the balance in their individual accounts in the first three withdrawals, which will give rise to greater pressure for the State to grant them non-contributory pensions (Pensiones Básicas Solidarias, PBS) or an increase in Solidarity Pension Contributions (APS), which entails an increase in fiscal spending in the solidarity pillar in the mid and long term.

And, thirdly, the higher 10-year Central Bank bond rates described above imply higher interest payments by the Government. The Chilean Central Bank estimates that these higher rates will give rise to higher interest payments by the Government of between USD 1.8 billion and USD 2.8 billion per year. These amounts exceed the collection of the proposed taxes for financing the expansion of the solidarity pension pillar, or are approximately equivalent to the entire 2022 budget for free Universities, Professional Institutes, Technical Training Centers and Higher Education Scholarships.

II.6 Lower returns of the more conservative pension funds

This year's rates hike has caused a negative return on pension funds, with greater exposure to local fixed income (funds D and E; see Chart 8). Similarly, there have been significant switches from fund E to other funds, making the loss of value of local fixed income instruments effective.

Graph 8.- Real monthly returns of the multi-funds and 10-year Central Bank Bond rates in UF (BTU) (1) - (2) (07/30/2020 = 100; 1st withdrawal)

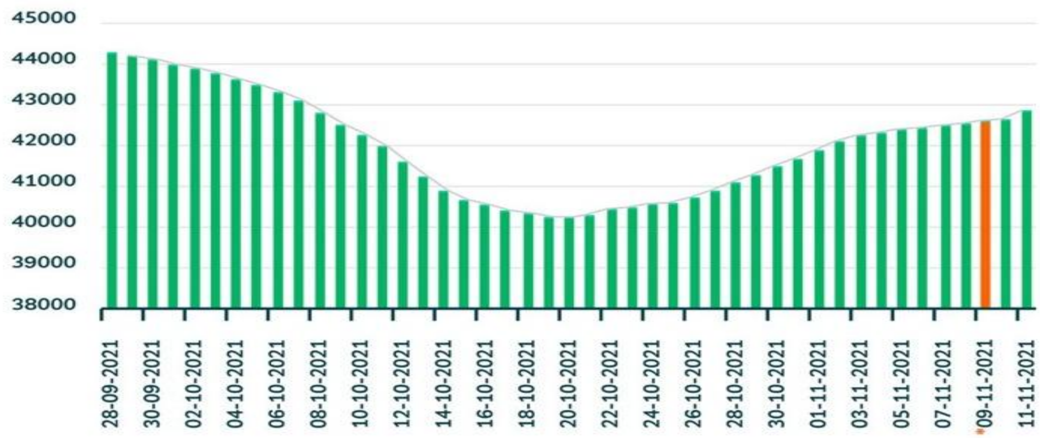


Source: Presentation by Mario Marcel, Chilean Central Bank (October 13, 2021).

Notes: (1) Nominal variation deflated by the variation of the UF for the period. (2) The daily 10-year BTU/BCU rate is used.

It is important to emphasize that the rejection of new withdrawal initiatives is key to improving the performance of the more conservative funds. In fact, since it was almost certain that the fourth withdrawal bill of law could be rejected, the returns of Fund E (the most conservative) were always positive. Thus, their weekly moving average was 6% higher between that date and November 11 (see Chart 9). This shows the positive aspect of the pension funds being used for the purpose they were designed for: to pay pensions.

Graph 9.- 7-day moving average of the share value of fund E



Source: Observatorio Perspectivas.

II.7 Tougher conditions for accessing mortgage loans

II.7.1 Higher cost of financing mortgage loans

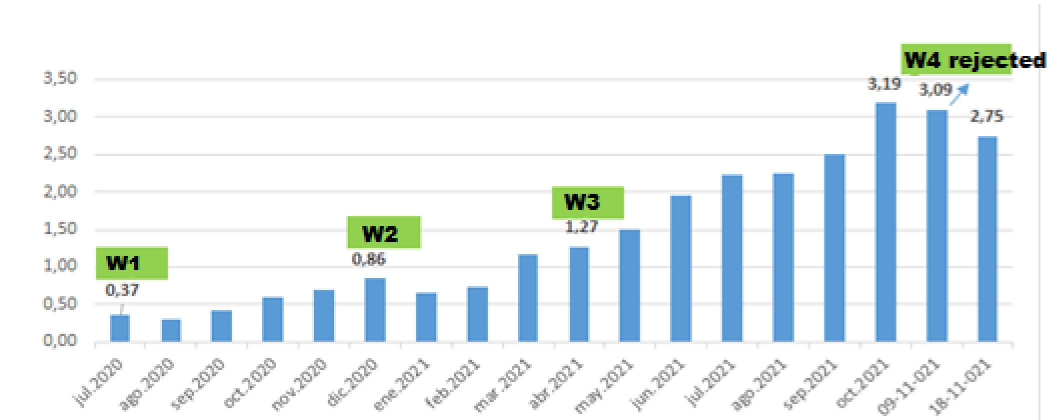
There is a very close link between bank financing costs and mortgage loan rates. This is so because in order to finance long-term loans, such as housing, banks require long-term financing, such as bond placements. In fact, according to the Association of Banks and Financial Institutions (ABIF), the correlation between real housing loan rates and the return on 20-year Central Bank Bonds in UF (BCU20) has been 77% in the last two decades.[4].

The BCU20 rate has increased significantly in recent months. In fact, between July 2020 (when the first pension fund withdrawal began) and October 2021, it increased from UF + 0.37% to UF + 3.19% (see Chart 10). After this maximum, when the idea of legislating on a fourth withdrawal of pension funds was rejected on November 9, the BCU20 rate fell to UF + 3.09%, and thereafter to UF + 2, 75% on November 18. The drop in the rate from the October high reflects the optimism of the financial market for the end, or at least the reduction, of withdrawals from the pension funds. However, the BCU20 rate as of November 18 is still considerably higher compared to July 2020 (by 238 bp, from UF + 0.37% to UF + 2.75%). The spread that the market allocates to bank debt must be added to these costs.

Hence, this translates into higher mortgage loan costs, which have increased after the third fund withdrawal, most likely due to the uncertainty regarding the approval of new withdrawals. In fact, the average annual rate of new mortgage loans rose to 3.56% in October, 2021, increasing 1.65 percentage points (pp) from its historical low of 1.99% in October 2019 and 0.92 pp from its level in July 2020 (2.64%) (see Graph 11).

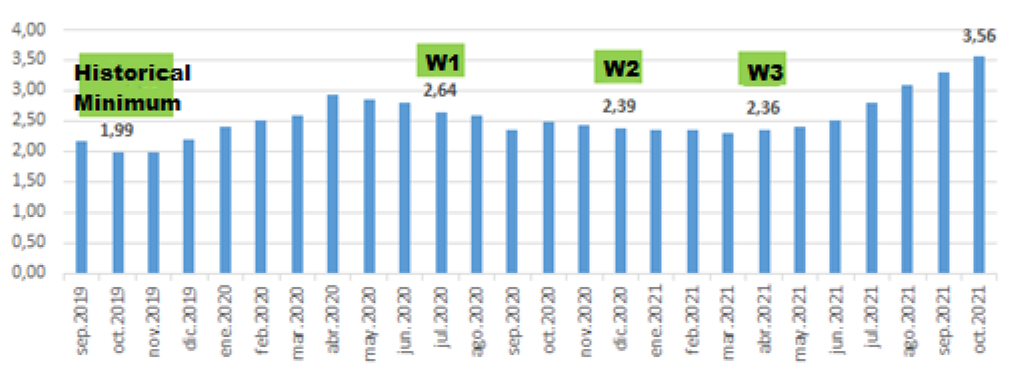
[4] Source: Abif Informa No. 174 October 28, 2021, page 4. Available at: https://www.abif.cl/wp-content/uploads/2021/10/Informe-ABIF-N-174-Cifras-financieras-Septiembre-2021.pdf

Graph 10.- Interest rate on 20-year Central Bank bonds in UF (BCU20)



Source: FIAP, based on Chilean Central Bank data.

Graph 11.- Average annual interest rates on mortgage loans (%)



Source: FIAP, based on Chilean Central Bank data.

It is worth mentioning that the interest rate shown in Graph 11 includes very different types of loans (fixed, variable and mixed rates, at different terms and financed amounts, etc.). Hence, for practical purposes, it is useful to have some measure of the average rate for a standard fixed-rate loan. According to ABIF online simulations[5] the cost of new mortgage loans as of November 18, 2021 is approximately UF + 5.5%, without considering insurance or other costs.

According to Chilean Central Bank data, the average monthly rate for 3-year loans in UF is 3.96% thus far in November, 2021, although in the latest weekly data available on Monday November 15, the rate was already slightly lower, at 3.82%. The previous rate, on Monday, November 7, had been 4%. Thus, the indicator stopped a five-week upward trend. Nonetheless, today's rate of 3.96% is the highest monthly average rate since December 2014, when it was at 4.14%.[6].

One of the larger banks in the market explained that it began lowering rates as soon as the cost of funding decreased, i.e.,

[5] Mortgage loan simulations at https://www.comparaonline.cl/

[6] Source: : https://www.latercera.com/pulso-pm/noticia/las-tasas-hipotecarias-frenan-cinco-semanas-al-alza-y-empiezan-un-lento-descenso/OTNCHIRQ35G5RABTPG3O3ZA2M4/

the cost for banks of obtain the funds for making long-term loans. And that occurred when the market sensed that the Senate would reject the fourth withdrawal. Is there any possibility of further rate reductions? For some experts, one will only see changes in interest rates when the next government has been defined and there is more clarity regarding pension fund withdrawals.

II.7.2 Shorter deadlines

The deterioration in the depth of the capital market not only affects interest rate levels, but could also affect the ability to finance long-term transactions. In the worst-case scenario, if withdrawals continue to exacerbate the lower demand for long-term debt instruments (which are used by banks to finance long-term mortgage transactions), it will be impossible to grant 20-year mortgage loans, for example. Prior to the pension fund withdrawals, there were mortgage loans at terms of up to 30 years.

There is a direct impact on the viability of financing home purchases in instalments. The value of a 20-year mortgage dividend is approximately $ 500,000; however, if the same transaction is financed over 10 years, the amount of the dividend increases to $ 807,000. This increase clearly has a relevant impact on the ability of families to finance the purchase of their homes.

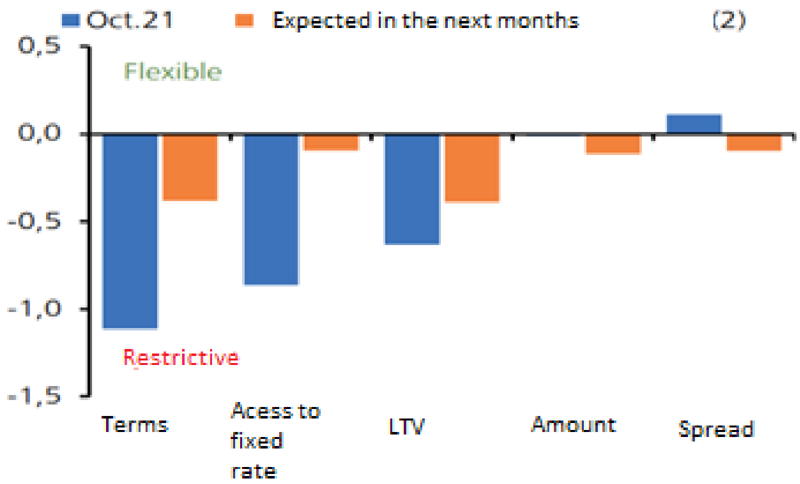
II.7.3 Higher Residential Loan to Value (LTV) ratio

Another more restrictive parameter in the granting of mortgage loans is the Residential Loan to Value (LTV) ratio. If banks required a 20% down payment on the value of a house in 2020, on average (with the bank financing 80% of the value of the house), now in 2021, the banks are demanding a down payment of up to 30% (financing only 70% of the value of the home).

II.7.4 Summary of changes in loan conditions

As stated in the Financial Stability Report (IEF) for the second half of 2021, published by the Chilean Central Bank, the reduction in the size of the funds brokered by the pension funds has reduced the capacity of the fixed income market to provide long-term financing, keeping uncertainty high. Due to the above, banks have tightened their conditions for granting loans, favoring variable or mixed rate products, reducing the terms offered and increasing the down payment requirement (higher LTV) [see Graph 12 and Table 5]. Although there has been an increase in interest rates associated with higher financing costs, the spread over and above the cost of funding for banks, defined as the additional cost for risk charged to debtors, remains low at about early 2021 levels.

Graph 12.- Mortgage loan conditions (1)



(1) The indicator is the net value of the responses weighted by the bank's participation in the housing portfolio.
(2) The difference between the loan interest rates and the bank's funding cost.

Source: Financial Stability Report (IEF) 2nd Half of 2021, Chilean Central Bank (page 41).

Table 5.- Change in mortgage loan conditions

Variables	**Median 2020**	**Extreme, Current**
Rate	Fixed: 2.9%	Variable
Term	25	15
LTV (Residential Loan to Value)	80	70

Source: Presentation by Mario Marcel on the Financial Stability Report (IEF) 2nd Half of 2021, Chilean Central Bank (Nov. 2021).

II.7.5 Higher dividend and impact on household budgets

The amount of the dividend paid by a mortgage debtor basically increases due to three factors. First, due to the increase in the interest rate on the loan. Second, due to the effect of inflation, which indirectly impacts the value of the home to be purchased through the increase in the value of the UF (the client pays the dividend in pesos). And third, the dividend also increases when the term of the loan is reduced.

Although it is true that an increase in the required down payment (lower LTV) reduces the dividend, the effect may ultimately be negative for a household budget that does not have the savings capacity to finance a higher down payment, forcing it to incur in debt (through a consumer loan, for example) to finance it.

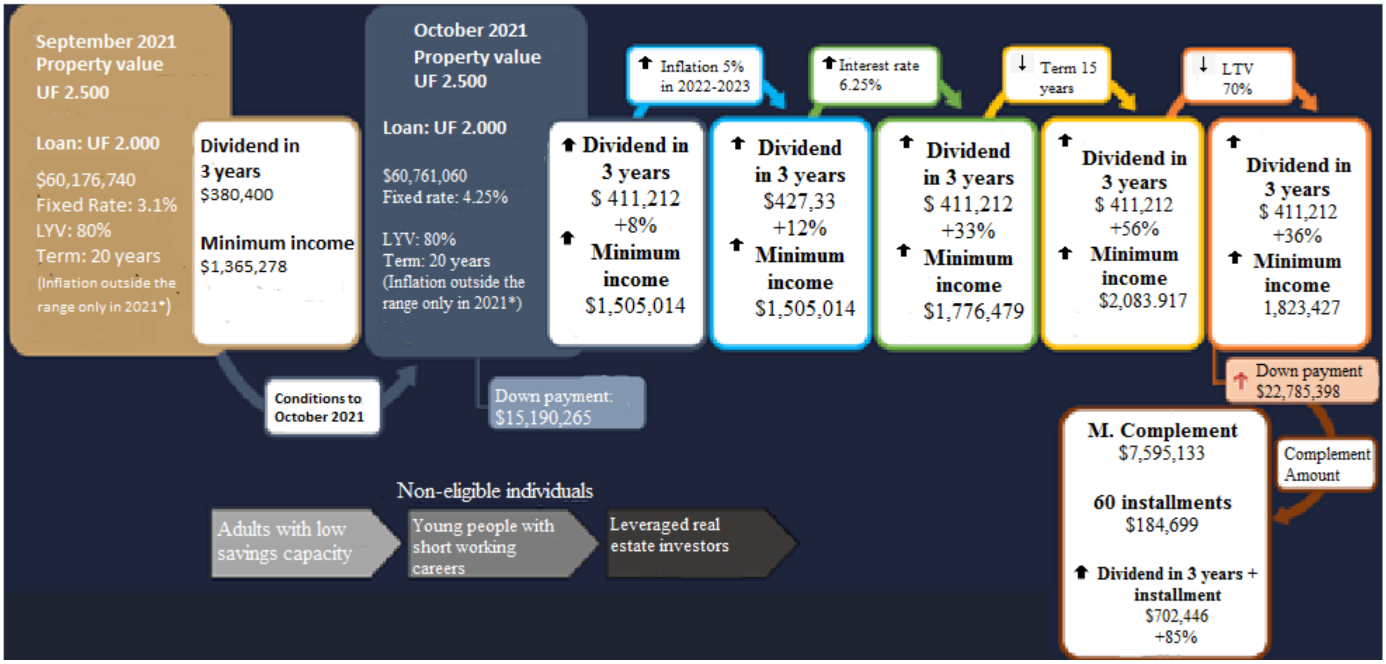
According to the ABIF, the impact of increasing the interest rate to UF + 5.5% would increase the amount of the dividend by 28% for a typical loan, equivalent to Ch$ 1.32 million per year.[7]. Furthermore, considering today's inflation of 6% (3 percentage points higher than the Central Bank's 3% target), the amount of the dividend of a typical loan will increase by Ch$ 180 thousand per year compared to a scenario with inflation at 3%. Thus, the combined effect of the increase in the mortgage rate and higher inflation could amount to an increase of $ 1.5 million per year or, equivalently, an increase of almost 32% in dividend amounts. This higher cost, as a proportion of the average household income[8], is equivalent to stating that households should use 8.3% of their income to offset the effect of inflation and higher mortgage rates.

A similar simulation was performed by the Chilean Central Bank, showing the effect on the dividend of a mortgage loan and the required minimum income, with different interest rate, term and Residential Loan to Value (LTV) assumptions. As can be seen in Figure 1, loan restrictions would imply a significant increase in the dividends and income required to access loans, which would limit access to housing, especially among low-income households, adults with low savings capacity and young people with short working lives.

[7] Consider a UF 2,400 loan at 20 years. The dividend includes amortization of principal and interest. It does not consider operating expenses, insurance or other associated costs. Calculated in relation to the dividend obtained with the average interest rate of July 2020 (2.64%).

[8]El According to the Central Bank's Household Financial Survey, the average household with a mortgage loan has an income of approximately Ch$ 1.5 million per month, and allocates approximately 34% of its income to the payment of financial obligations. 14% of said payments are linked to mortgage loans. 8.3% is obtained by performing the following division: (1,320 thousand + 180 thousand) / (12 * 1,500,000).

Figure 1.- Effect on the dividend of a mortgage loan and the required minimum income, with different interest rate, term and Residential Loan to Value (LTV) assumptions.



(*) Value of the UF on Sept-21: $ 30,088; and Oct-21: $ 30,381. For the October 2021 scenario: inflation of 5.3% at the end of 2021, dropping to 3% as of 2022. For alternative scenarios: inflation of 5.3% at the end of 2021; 5%for 2022-2023 and 3% as of 2024. The dividend does not include insurance or operating costs. Consumer loan with an annual interest rate of 16%. The Oct-21 mortgage interest rate considers new loans in UF, at a fixed rate nationwide as of October 22, 2021 (does not include development instruments).

Source: Presentation by Mario Marcel on the Financial Stability Report (IEF) 2nd Half of 2021, Chilean Central Bank (Nov. 2021).

Thus, for example, assuming a property valued at UF 2,500, in September 2021 we have the base scenario in which a bank financed a mortgage loan of up to UF 2,000 (LTV = 80%; payment = 20% = 500 UF = Ch$ 15 million), with a fixed rate of 3.1% for a 20-year term. The three-year dividend under these conditions was $ 380,400. Then, in October 2021, maintaining all the previous conditions and increasing the fixed interest rate to 4.25%, the three-year dividend increases by 8% compared to the base scenario (up to $ 411,212) and the minimum income increases by 10% (from Ch$ 1.4 to Ch$ 1.5 million). If we add the effect of inflation, the three-year dividend increases by 12% (to $ 427,336). If we assume an alternative scenario in which the fixed rate rises from 4.25% to 6.25%, the term of the loan is reduced from 20 to 15 years, and the required down payment amount increases from 20% to 30% of the value of the property (i.e. the LTV drops from 80% to 70%), then the dividend goes up by 36% (to $ 517,747), the minimum required income increases by 21% (from Ch$ 1.5 to Ch$ 1.8 million) and the down payment amount increases by 50% (from Ch$ 15.1 million to Ch$ 22.8 million). If we suppose that a worker takes out a consumer loan of Ch$ 7.6 million, in 60 installments, at an annual interest rate of 16%, and does not have sufficient savings to finance this new down payment amount, the amount of the three-year dividend, adding the consumer loan installment, increases by 85% compared to the baseline scenario (up to Ch$ 702,446), critically raising the financial burden on households. Thus, replicating ABIF's calculations, the combined effect of the increase in the mortgage loan rate, higher inflation, the shorter term and the higher down payment amount, could amount to an increase of Ch$ 3.9 million per year. This higher cost, as a proportion of the average household income, is equivalent to suggesting that households must use 21.5% of their income to offset the combined effect of all loan restrictions.

III. Final comment

The Chairman of the Chilean Central Bank (BCCh), Mario Marcel, has pointed out that the effects of pension withdrawals could be non-linear, cumulative and increasingly irreversible. In this regard, he pointed out that their benefits are reduced if they are concentrated among members with higher balances in their accounts, and also due to their decreasing impact on commercial activity. On the other hand, he pointed out that associated costs will rise if withdrawals put pressure on inflation and the risk of disruptions in the financial market increases. “The economic cost of the withdrawals is no longer a hypothesis or warning for achieving a concrete effect, which can already be observed in variables such as the CPI, interest and exchange rates. In a scenario of crumbling expectations and structural changes in the financial system, the measures applied by the Central Bank to reduce the impacts on the market are losing effectiveness, affecting the evolution of the economy and the well-being of the population in coming years, he explained.

Appendix: Early Life Annuities

Together with the withdrawals from the pension funds, that included both active members and Programmed Retirement (RP) pensioners[9], in the 3rd and 4th (rejected) withdrawal, the Law considered the 1st and 2nd Life Annuity (LA) advances.

LA advances are essentially different from Pension Fund withdrawals, since, unlike PW, in which the funds are owned by the pensioner, the LA funds are not owned by the pensioner, but by the Life Insurance Companies (LICs). In the 1st and 2nd (rejected) advances, the LICs are obligated to pay an amount of money to all their pensioners who request it. Table 6 shows that there are large differences between the two withdrawals.

Table 6.- Comparison of Life Annuity withdrawal bills of law in Chile

	First advance payment	**Second advance payment (rejected)**
Amount	10% of the value of the **technical reserve** that pensioners maintain in their respective LICs to cover their pension payments.	10% of the **funds originally transferred** from their AFP accounts to the respective LIC
Cap	150 UF	150 UF
Replacement	Charged pro rata to the future monthly life annuity amount	The amount of the requested advance will be paid and discounted pro rata from the income that remains to be paid to the life annuity holder, until the advance is paid off.
Percentage to be discounted from the LA	The same percentage as the percentage of the fund of the withdrawn amount	Under no circumstances may the amount exceed 5% of the insured's monthly income. The insured may always request a 90-day payment extension.

Source: Chilean Central Bank

LA advances generate impacts similar to those of Pension Fund Withdrawals. However, by affecting the reserves of the LIC, and particularly in the second advance, their solvency is put at risk, and therefore the payment of the pensions of almost 660 thousand LA pensioners and other insurance beneficiaries. There is no other country in the world that has forced changes to life annuity contracts as part of its response to Covid-19.

[9] In Chile, a person can retire in the Programmed Withdrawal or Life Annuity modes, or a combination of both. In PW, the AFP continues to manage the pensioner's funds and the pensioner receives a pension, the amount of which is calculated according to Law. In LA, there is a contract or policy between a Life Insurance Company and the pensioner, in which the LIC agrees to pay the pensioner a fixed pension for life (adjusted for inflation) in exchange for the payment of a premium financed with the savings accumulated in the pensioner's AFP.