

# EFFECTS OF THE RETIREMENT PLAN REFORM ON THE CONTINGENT LIABILITY PROJECTIONS AT THE UNIVERSIDAD AUTÓNOMA DE SAN LUIS POTOSÍ

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## Resumen

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**E**l objetivo es evaluar el impacto de las reformas pensionarias que ha efectuado la Universidad Autónoma de San Luis Potosí (UASLP) en el pasivo contingente del pago de los beneficios de retiro de sus trabajadores. Con las reformas el pasivo disminuye entre 45 y 50%, lo que representa un alivio a la carga financiera de jubilaciones para la universidad. Las variables que más impactan al pasivo contingente son: el rendimiento financiero del fondo pensionario, los incrementos salariales de los jubilados, los años adicionales que laboren pudiendo jubilarse y su esperanza de vida y en menor medida lo hacen las aportaciones al fondo y la edad inicial del empleado.

### Palabras clave:

- Pasivo contingente
- Jubilación flexible
- Rendimiento financiero del fondo pensionario
- Salario de retiro

## Abstract

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**T**he objective is to evaluate the impact of the retirement plan reforms made by the San Luis Potosi Autonomous University (UASLP) on the contingent liability that the payment of retirement benefits for its workers represents. As a result of the reform these liabilities decreased between 45 and 50%, which means a partial relief of the financial burden of retirement payments for the university. The variables with greater impact on contingent liabilities are: financial return of retirement funds, increases in retirement payments, the additional working years after being eligible for retirement and life expectancy, and to a lesser degree the contributions to the fund and the employee's initial age

### Key words:

- Contingent liabilities
- Flexible retirement
- Financial return of retirement funds
- Retirement wage

## Introduction

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One problem facing all organizations these days is the financial viability of their retirement systems, as defined benefit schemes (DB systems) are not sustainable, because they set fixed retirement benefits for employees, regardless of the financial situation of the retirement systems. The amounts of such benefits are paid from contributions—through taxation— from active workers.

Now with the demographic transition, these systems do not guarantee the payment of such benefits, since the number of active workers for every retiree has been declining in recent years, a situation that will be further exacerbated with the coming retirement of the *baby boomer* generation, individuals born during the postwar period—between 1946 and 1964. The eldest boomers are reaching the age of 65 in 2011, which in many systems is the retirement age.

In 1960 in Europe, the ratio of active workers for every retiree was about five to one, while by 2030 this figure is expected to reach two to one (Visco, 1999: 29). Another issue that aggravates this problem is the increase in life expectancy. When social security in Mexico first started, with the creation of the Mexican Social Security Institute (IMSS) in 1943, life expectancy at birth was 40.3 years, whereas now it is at 78.1 years for women and 73.2 years for men, and the trend is expected to continue rising (Mexico's National Population Council, 2006), implying that pension systems will have to meet the payment of retirement benefits for longer periods of time. Under these circumstances, defined contribution systems have been created (known as defined contribution DC or individual retirement accounts), in which employees and their employers must make contributions to the workers retirement accounts during their working lives and, the amount of retirement benefits depends on the amounts contributed, as well as the financial returns of the accounts during that period. With such schemes, the benefits are not fixed and the worker could not save enough to ensure a decent standard of living during retirement, which added to the natural occurrence of diseases at older ages and their costs, complicates the issue even further.

Among the options available to organizations to address this crisis, are the following:

- Increasing the retirement age.
- Reducing retirement benefits.
- Encouraging the continued employment of workers eligible to retire.
- Increasing savings and retirement contributions.
- Setting a retirement salary ceiling.
- Improving the financial performance of pension funds.
- Transparent management of retirement funds.
- Increasing government contributions to retirement accounts.

## Status of Mexican public universities

Public universities in Mexico are not immune to this problem, which has led them to reform their pension systems, that were once type BD, and were turned into mixed schemes. Many of the changes mentioned above have taken place, except for a decrease in retirement benefits. These changes have been promoted by the Secretariat of Public Education (SEP), seeking to reduce the contingent liability projections of institutions, that seriously threaten their financial solvency (Izar, 2010: 296).

In 2001 a commission was formed by SEP and the National Association of Universities and Institutions of Higher Education (ANUIES), to analyze the retirement pension problem in Mexican public universities. It was found that the schemes, requirements and benefits for pensions and retirement are very different between them. The commission got the Mexican Congress to issue the creation of an extraordinary fund to support structural reforms in these institutions' pension systems, with rules drafted by SEP for accessing benefits, with requirements summarized in Table 1:

**Table 1**  
**Requirements to access funds for the structural reform of university pension schemes**

To carry out a standard actuarial assessment of universities in order to make modifications to their existing pension plans. Single payments for making comparisons to determine the actuarial deficit reduction of benefits, reducing the contingent liabilities acquired as well as tax savings.

To reform collective contracts, statutes, and in a given case the university institutional laws, to ensure the application of the structural reforms.

Create the legal provision to enable investment in the pension fund, where the extraordinary contributions will be deposited along with current reserves and future contributions, transparently, eliminating the possibility of using resources for other purposes while external audits by the federal authority will be conducted.

Source: SEP, (2006)

It should be noted that the expectation of accomplishing these reforms was low, since public universities are spaces of the greatest political, social and economic pluralism in Mexico. However, several of them passed, among which are the following:

**Table 2**  
**Reforms in public universities by generation**

Generation	Reform
Current	To establish a minimum retirement age and do so gradually, in order for workers to be least affected
	To make gradual increases in pension schemes according to age and seniority
	To define a salary pension regulator that is based on the average salary of the employee's working life and not on his or her last salary as an active employee
	To implement incentives for continued employment for workers who defer their retirement, that would not form part of retirement benefits
Future	To set pension fund contributions, which increase gradually each year, reaching levels of up to 15% of the institutions' payroll
	To raise the age of retirement to at least age 65 and 30 years work seniority
	To implement early retirement schemes starting from age 60
	To establish input and contributions to the fund at levels of 15% of the institutions' payrolls from the beginning
	To make fees and contributions portable to facilitate the establishment of individual accounts
	To define a benchmark salary pension

Source: SEP, (2006)

With these reforms in place, the contingent liability projections of the universities have been reduced by over 128 billion pesos, which represents savings of more than 30% (SEP, 2006).

## The case of the Universidad Autónoma de San Luis Potosí

The first UASLP pension plan was implemented in the 1960's, long before the formation of the academic union in 1980. This pension fund was initially constituted through university endowment inputs.

In fact the first university retirement and pension system was approved by the University Executive Council (Board of Trustees) in June 1979 and then amended in September 2002.

The first retirement scheme foresees three types of pensions: retirement according to years of service; another under the old law of the Institute of Services and Social Security for State Workers (ISSSTE) according to age, as the employee reaches a certain age and years of service, in this case 60 years old and 15 or more years of service; and a disability pension, for those who obtain medical certification that qualifies them as physically or mentally unable to continue working, and have been working for the institution for at least 15 years.

Under this first scheme workers are eligible for retirement benefits equal to their last base salary earned as active workers, after reaching 30 years of service for men and 28 for women. To determine the retirement compensa-

tion, the rank nominations that workers had over the last 5 years of active service are not taken into account, but only their last base salary, including benefits, with the exception of vacation pay. Of the total amount of the pension, a portion is covered by the university and another portion is covered by ISSSTE, depending on the base salary contributions and the amount of time the worker had contributed to the institute, according to ISSSTE's own regulation.

The entry into force, as of September 27, 2002, of the new pension plan derived from the reforms suggested by SEP, applicable to workers hired after December 16<sup>th</sup>, 2000, includes substantial changes over the previous one, among which the most important are: the retirement monthly pension will equate to 100% of the salary of an active worker, if the sum of age and seniority of the worker is 95 years or more, regardless of gender. The worker shall be entitled to an old age pension if older than 65 years and had worked for the institution for 20 years or more. Only workers who have worked for the institution for 20 years or more will be eligible for the disability pension. Also, this new regulation includes an article stating that monthly payments for retirees will continue to increase at the same ratio as those of active workers, in what is known as a "dynamic pension" (Compilation of the University Legislation, 2004: 295).

In addition, under the new rules, all active employees and future retirees make contributions to the institutional pension fund. These contributions began in 2005, starting from 2% of the wage of academic staff and authorities and 1% for administrative and non-unionized employees. This percentage has been increasing each year by an additional 1% until finally being settled at 8%. For its part, the institution will make an equal contribution to the pension fund at the beginning of each year (Regulation for the Retirement, Aging and Disability Pension Fund for UASLP Workers, 2006).

The pension system at UASLP has changed from defined benefits (first scheme), to a mixed system, with a part of defined contributions to the pension fund made by workers, retirees and the institution, and another of defined benefits, corresponding to the payments pensioners receive according to their age and seniority.

In 2006, to encourage university workers to remain active, it was decided to give a 1.5% incentive to workers choosing to remain employed after 30 years of seniority, increasing this amount by an additional 1.5% until the 37<sup>th</sup> year, when it reaches 10.5 %, thereafter the bond remains at that same value for the remaining years the employee continues working. This bonus is excluded from the retirement benefit plan (Collective Bargaining Agreement of the Union of Academic Personnel 2004-2006, 2004: 225).

A system of financing with resources from the pension fund for university employees and retirees who contribute to it was also recently introduced. It has two objectives: to improve the financial performance of the fund and to make credit available to university employees. This funding scheme has been well received by university staff and has generated substantial revenues for the pension fund, with interest rates ranging from 10.75 to 12.75%.

The University has taken action on pension challenges, the question is whether this will be sufficient to achieve the financial solvency of the pension fund.

## Study Objectives

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First, to explore the variables that affect the projected contingent liabilities resulting from future retirement benefit payments and to what extent each variable affects it. As well, to establish if there are significant differences in these projections as a consequence of the retirement reform and for each of the variables studied.

The research questions posed are: (1) What is the impact of the amendments to the UASLP pension plan on the retirement fund's projected contingent liabilities? (2) What variables contribute the most to the generation of these projections?

## Research Hypothesis

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H<sub>1</sub>: The changes to the UASLP pension plan statutes have had a significant effect in reducing the contingent liability projections for the institution.

H<sub>2</sub>: There are significant differences in the impact several variables have on the estimated contingent liabilities, variables such as: monthly pension benefits, yearly pension increases, the pension fund's financial performance, the amount contributed to the fund, worker's age at enrollment, life expectancy and years worked after reaching retirement age.

## Theoretical Framework

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With a growing number of people reaching retirement age, the survival of social security systems is put in jeopardy. Regarding the case of rapidly aging industrialized nations as a result of increased life expectancy and lower birth rates, Quinn (1997: 10) notes that in 1960, OECD member countries population segment of over 65 years, was 9%, while in the late twentieth century it increased to almost 14% and by 2030 it is estimated to reach 23%, due to the *baby boomers* reaching retirement age. The participation rate for these workers in the labor force has declined significantly over the past two decades, due to incentives for early retirement. However, in recent years there have been changes pointing in the opposite direction, encouraging instead late retirement. Mandatory retirement was first delayed from 65 to 70 years and subsequently altogether banned.

Burtless (1999: 5) indicates that the participation of women in the workforce in the United States increased during the period between 1968 and 1998, while that of men decreased.

For Kinsella and Phillips (2005: 44) the aging of the population is the most important demographic process in the third millennium, and in less developed countries it has only just begun. According to projections, by 2050 the world will have 1.5 billion people over the age of 65 and of these, 80% will reside in the poorest regions, this alone will significantly affect the socioeconomic development of all nations. Currently the oldest regions are Europe and Japan, while the u.s. is ranked 38<sup>th</sup>.

In this regard, Ken Dychtwald (1999: 2) indicates that for the first time in its history, the u.s. is becoming a nation populated by the elderly. The 50+ group is the fastest growing population segment, reaching 74 million people and by 2010, is expected to reach 96 million, while the 18 to 34 years bracket is declining, the forecast for 2010 is less than 69 million. In addition, Dychtwald says that people over 50 are breaking stereotypes associated with older people, one of which was that at this stage of life, the elderly were typically poor, which was the case for one in three seniors in 1960. But now this segment has the lowest poverty level, because at 27% of the total population, they control 70% of the net value of the u.s. economy. The market for them is big, and they are healthier, better educated and wealthier than previous generations. They have been defined as modern, cheerful and alive and when entering a new stage in life, they have the time, health and resources to become big consumers, which is why marketers should not ignore them.

Another major demographic change is the increase in life expectancy of people as a result of medical advances. As mentioned before, in the middle of the last century, average life expectancy in Mexico at birth was 40.3 years, while it is now at 78.1 years for females and 73.2 years for men. The future trend is for it to continue to rise (Mexican National Population Council, 2006).

The retirement age is a rather controversial issue that has caused a stir in many countries, as it impacts an important sector of the population. Some authors say that the retirement age is a workers right and therefore it should not be raised, in addition, the retirement of older workers, leaves jobs for young people, thus strengthening the economy by mitigating the problem of unemployment. Other authors believe that without raising the retirement age, there will be no available funds to pay for the retirement benefits of a growing number of people who will also live for more years on average.

In several nations, both in the first and the developing world, there have been many demonstrations against government measures to raise the retirement age, while others have tried to establish the imposition of a mandatory retirement age, which some scholars regard as discriminatory (Davies, 2005: 1).

From the standpoint of productivity, there are those who point out that older workers have more experience and the necessary knowledge to perform their work, while their opponents say that with increased age, workers have less physical capacity for optimum job performance (Forbes, 2005: 1; McCartney, 2005: 1).

The additional years worked after reaching retirement age become a true palliative for the financial solvency of pension systems, in this sense, the UASLP implemented an economic incentive of 1.5% per year, from the 31<sup>st</sup>

to the 37<sup>th</sup> year. Yet, in interviews with the institution's staff, it has been made clear that this measure does not encourage them to remain on the job, although they indicated they would agree to continue working if measures such as what some scholars call "flexible retirement", were implemented (Izar and Ynzunza, 2011: 6).

Dychtwald and Baxter (2007: 10) suggest that organizations should forecast the aging of their workforces and trends for retirement, establishing flexible retirement programs with adequate benefit strategies while creating a culture that honors older workers. For its part, Strack and his colleagues (2008: 10) recommend measures such as flexible schedules and workplaces. Byham (2008: 4) notes that it is preferable to retain staff rather than re-hiring, as it is less costly. He suggests actions such as flexible working hours and workplaces as well as job sharing.

Geber (2000: 9) narrates the experience of Monsanto, which in 1991 created the "Retiree Resource Corps" designed for workers close to retirement who have the option to choose the type of work they would be willing to do, thus delaying their retirement. Albeit, allocations are done based on the company's needs.

An additional advantage of flexible retirement is to retain the employee's knowledge within the company, especially the tacit and explicit knowledge that only comes with time and experience, the kind that today represents a pressing need for organizations and has led to a new management discipline precisely called "knowledge management" (Smith, 2005: 2, Aiman-Smith *et al.* 2006: 9).

## Methodology

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First, defining a contingent liability projection, which is a forecast of the amount of retirement benefits payable, at present value, to an employee who retires from his active life as a university employee, whose payments are made from the time of retirement until the end of his life, as established by institutional regulation.

The variables that affect this forecast are the following:

- Worker's age at enrollment. It refers to the worker's age when he or she starts working for the university, and it affects the amount of the contingent liability projection, because, if an employee starts to work at an older age, he or she will be older at retirement, and consequently take fewer years as a pensioner, which decreases the amount of such projection.
- Workers life expectancy. If people live longer, retirement benefits will have to be paid to workers for longer, with a consequent increase in the contingent liability projection.
- The worker's retirement payments. If the amount of such allowance increases, so does the contingent liability projection.

- Yearly pension payment increases. Retirement payments increase at the same rate as the wages of current employees, what is referred to as “dynamic retirement”, which will increase the contingent liability projection.
- The pension fund’s financial performance. Since workers now make contributions during their working lives to the pension fund, which is managed so as to find an acceptable financial return for the managed risk, the higher the financial performance, the more resources there will be for the payment of retirement benefits, which reduces the contingent liability projection.
- The contributions to the pension fund. Similar to the previous variable, the greater the contributions during the active life of the employee, the more will accrue and the contingent liability projection will then decrease.
- The years worked after reaching retirement age. If the worker decides to work for more years after reaching retirement age, the time he or she will receive retirement payments will be reduced, along with the contingent liability projection.

The contingent liability has been calculated taking into account the typical values for the variables involved, which are summarized in Table 3:

**Table 3**  
**Variable values for the base case**

Variable	Value for the base case
Worker's age at enrollment	29 years old
Life expectancy	80 years
Initial pension payment	50,000 \$/month
Yearly pension payment increase	4.2% annual
Pension Fund financial performance	7.0% annual
Employee's contributions to the fund	3,600 \$/month
Retirement age + seniority	95 years

Source: Authors.

The base wage used for this case is that of a full-time faculty atop the academic ladder. For the contingent liability calculation it is assumed that the worker makes pension fund contributions throughout his or her working life, these increase at the same rate as wages and also generate interest within the pension fund at an equal rate to the fund’s financial performance. Once employees retire, they continue contributing to the fund, but begin to receive their retirement pay. This amount, at current value, multiplied by life expectancy, discounting the fund’s financial performance, results in the contingent liability projection.

Following, a sensitivity analysis is carried out in order to observe the impact for each of the variables involved in the contingent liability projection, with all other variables remaining constant (*cetera paribus*).

Then we present a comparison of the contingent liability projection for each category of UASLP employees, before and after the pension reform, with the percentage of savings brought about by the change in the retirement legislation.

Finally, an analysis was done on the projections of the contingent liabilities, before and after the UASLP pensionary reform, to determine which of the aforementioned variables make a difference of statistical significance for each case. This analysis was performed using the analysis of variance (ANOVA) statistical technique.

## Results

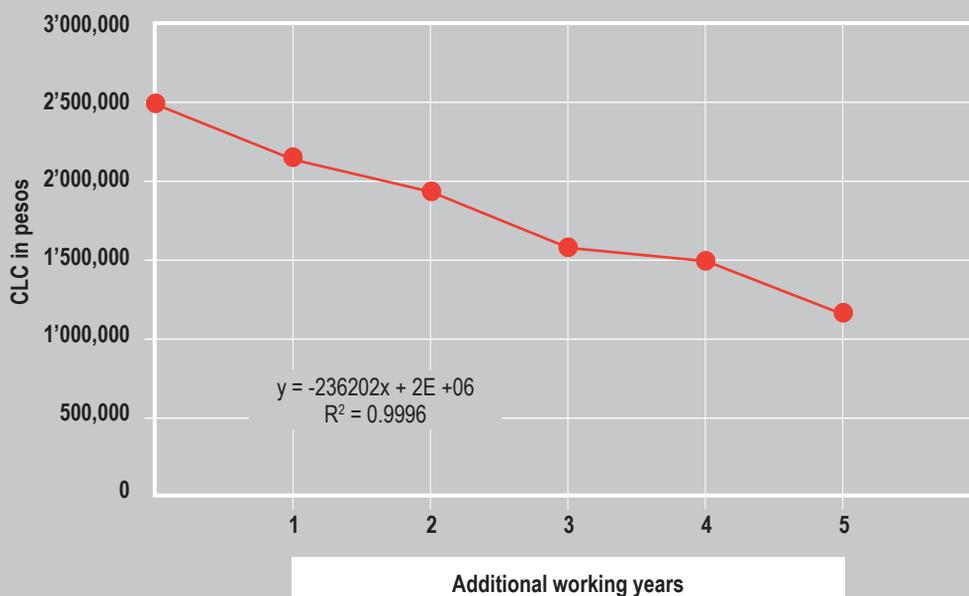
The results were obtained using a spreadsheet. The aggregate of pension fund contributions made by an employee during her working life, is used for her retirement payments, the difference of that amount versus all the payments until the retiree dies, represents what, for the purpose of this study, would be considered the contingent liability for the institution.

For the base case with the values of the variables presented in Table 3, the calculated contingent liability is \$2,466,605 pesos.

For sensitivity analysis, in the case of the additional working years variable, we have obtained the following graph:

Figure 1

Contingent liability calculation (CLC) with variation of additional working years



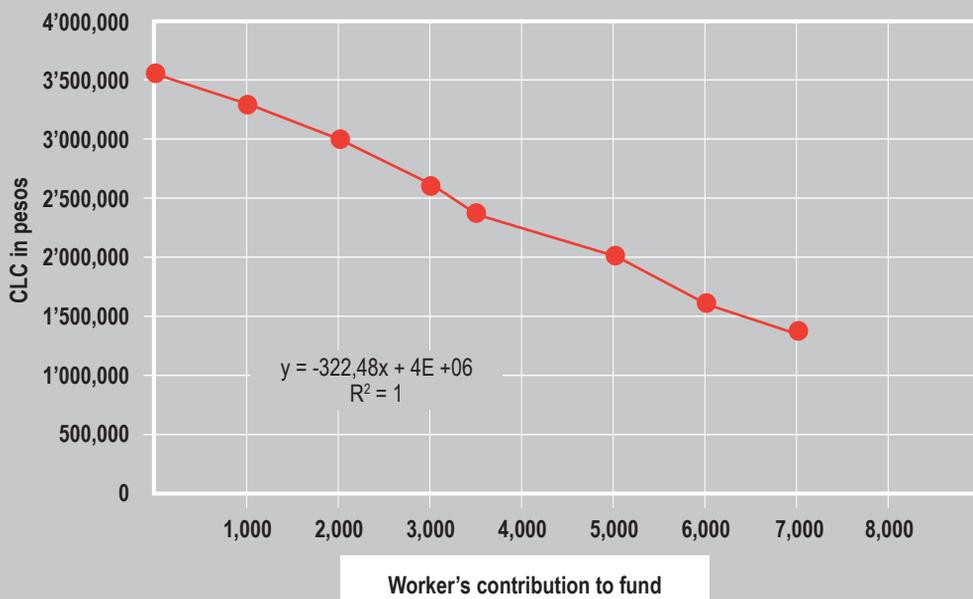
Source: Authors.

We have included the equation of least-squares best-fit and the coefficient of determination ( $r^2$ ), showing that the linear fit was excellent. The presence of a negative slope indicates that for each year that the employee remained on the job, the calculation decreased by \$236,202 pesos.

In the case of the worker's contribution to the fund the linear fit was also perfect ( $r^2 = 1$ ) on a negative slope as well, indicating that for every peso the worker contributes to the fund, the calculation falls by \$322.48 pesos as shown in Figure 2.

Figure 2

Contingent liability calculation with variation of the worker's contribution to the fund

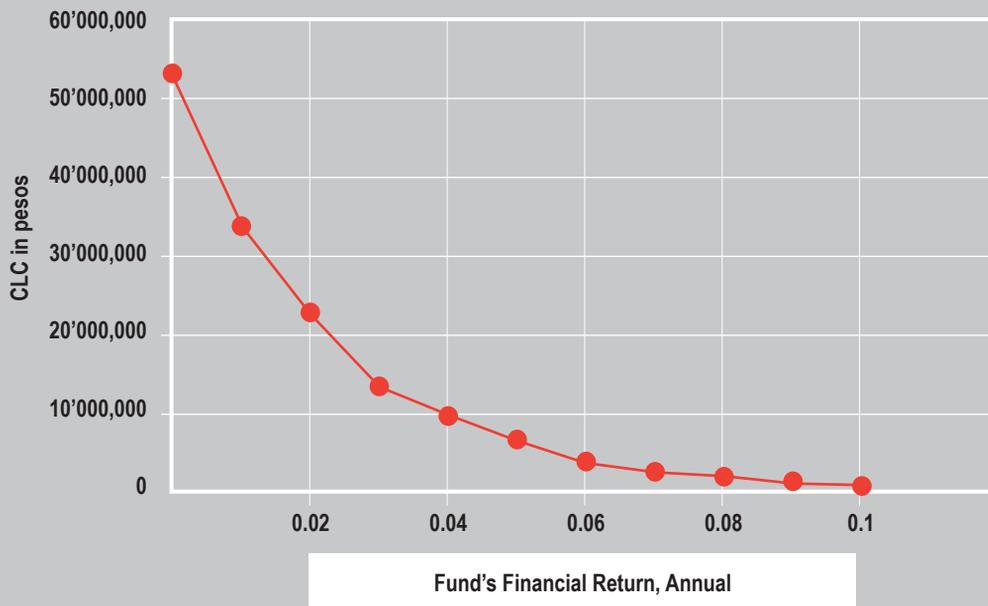


Source: Authors.

When calculating the contingent liability with the fund's financial performance, the fit obtained was nonlinear and inverse, as shown in Figure 3. There is a greater change when the yield increases on the left side of the graph, therefore if the performance goes from 0 to 2% per year, the liability decreases from \$53.57 to \$22.44 million pesos, which causes a decrease of \$15.57 million pesos for every percentage point. However, on the right side of the graph the decrease in the liability appears to be much lower, as increasing the financial performance from 8 to 10%, causes a decrease from \$1.518 to \$0.481 million pesos, which represents a change of \$518,500 pesos per percentage point.

Figure 3

Contingent liability calculation with variation of the fund's financial performance



Source: Authors.

For the effect of the yearly pension payment increase in the calculation the graph shows a non-linear positive correlation, with a much slower increase in the calculation on the left side of the graph, since by increasing the pension payments from 0 to 2%, the resulting calculation increases from \$91,700 to \$732,400 pesos, an increase of \$320,300 pesos for every percentage point; on the right side of the graph, the increment is much greater, for an increase in the retirement payment from 8 to 10%, the calculation jumps from \$13.21 to \$29.75 million pesos, an increase of \$8.27 million pesos for every percentage point the benefit payment increases as shown in Figure 4.

Figure 4

## Contingent liability calculation with yearly increases in the worker's pension payments

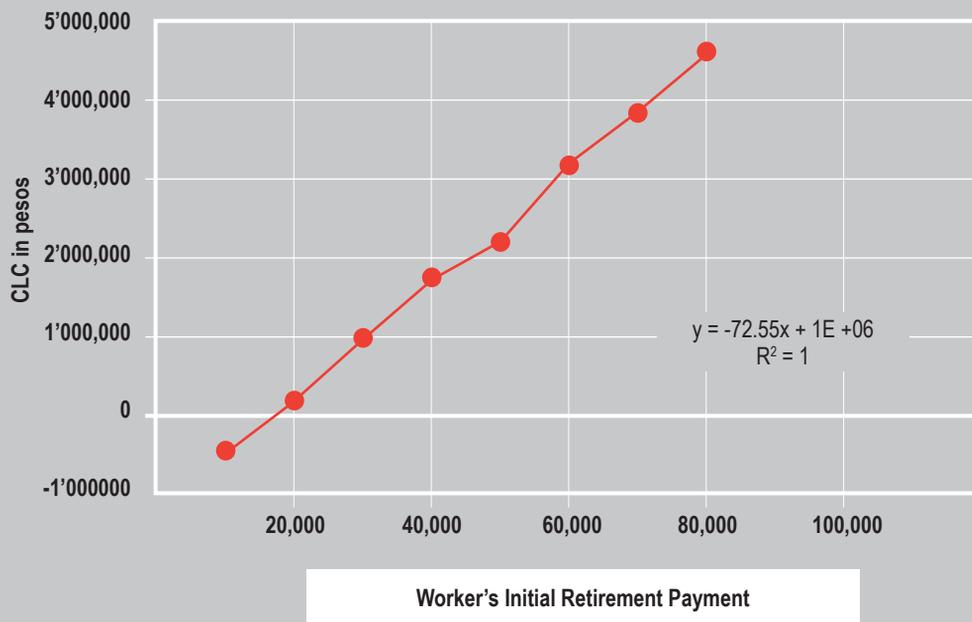


Source: Authors.

The sensitivity to the starting retirement payment presents a direct linear relationship with a perfect fit, increasing the contingent liability calculation by \$72.55 pesos for every peso the worker's starting retirement payment increases. As shown in Figure 5.

Figure 5

Contingent liability calculation with increases in the worker's starting retirement payment

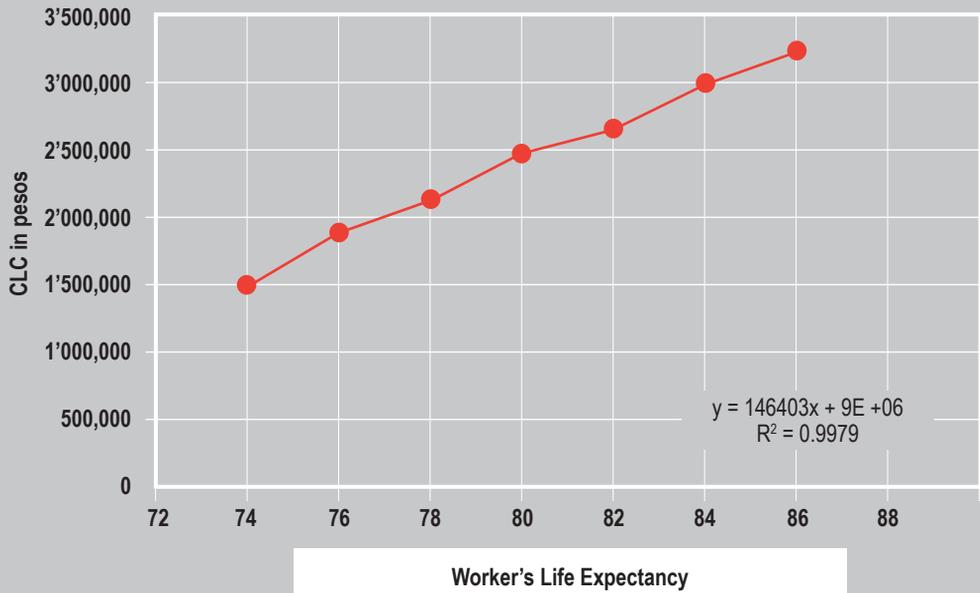


Source: Authors.

The sensitivity of the contingent liability calculation to the worker's life expectancy, also shows a direct and linear positive relationship with a perfect fit. This is illustrated in Figure 6, where the adjustment equation indicates that each additional year of the worker's life increases the contingent liability calculation by \$146,403 pesos.

Figure 6

## Contingent liability calculation with increases in the worker's life expectancy

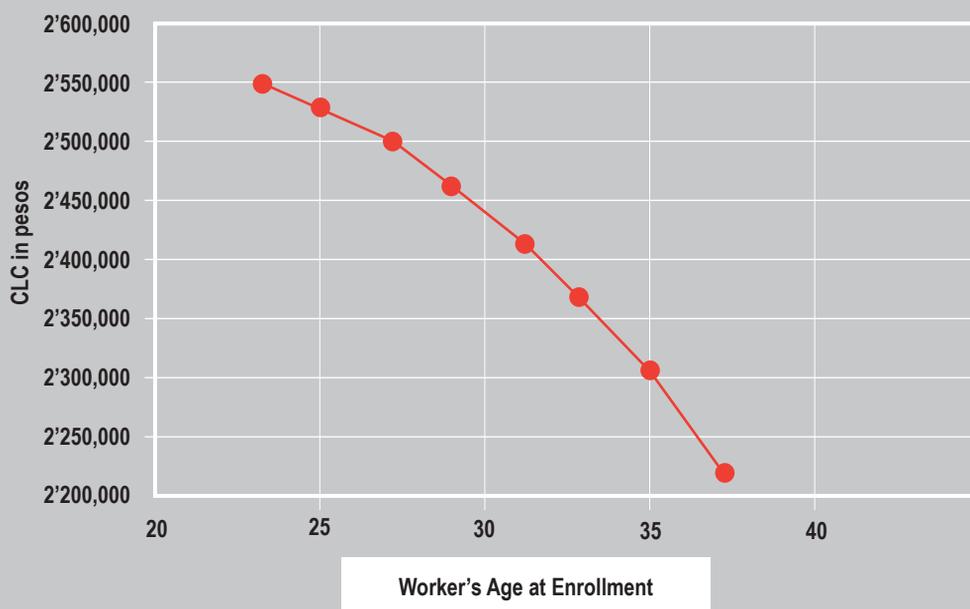


Source: Authors.

Finally, Figure 7 shows the change in the contingent liability calculation according to the employee's age at enrollment. The relation is inverse and nonlinear, showing a greater change on the right side of the graph, where with an increase in age from 33 to 37 years, the calculation decreases from \$2.369 to \$2.231 million pesos, decreasing \$34,500 pesos for every year; while on the left side, if the age of enrollment increases from 23 to 27 years, the liability only decreases from \$2.549 to \$2.502 million pesos, for a decrease of under \$12,000 pesos for every year of age increase.

**Figure 7**

**Contingent liability calculation with increases in the worker's age at enrollment**



Source: Authors.

Table 4 shows a comparative analysis of the amounts calculated for the contingent liabilities before and after the institutional pension reform, for each job category, using the typical values for the variables involved.

**Table 4**  
**Comparison of contingent liability calculations before and after the reform for each job category**

Job Category	Initial retirement monthly payment	Monthly contribution to the pension fund	Contingent liability calculation		savings % with the reform
			Sin reforma	Con reforma	
Authority	75,000	5,000	7'045,459	3'828,897	45.65
Full time faculty	50,000	3,600	4'696,973	2'466,605	47.49
Part time faculty*	14,000	900	1'315,152	725,477	44.84
Employee	16,000	1,000	1'503,031	838,330	44.22
Unionized Employee	10,000	700	939,395	499,770	46.80

Working 20 hours per week.  
Source: Authors.

Average savings in the contingent liability calculation for the pension reform are around 45%, which represents a huge relief of about \$4 billion pesos that was encroaching upon the institution's pension fund contingent liability projection.

An analysis of variance has also been carried out to compare the contingent liability calculation, before and after the reform, to determine which variables make more of a significant difference. Table 5 summarizes the results of such analysis for each variable.

**Tabla 5**  
**Síntesis del análisis de varianza del estudio**

Variable	variance range	Contingent liability calculation			Pi Value
		Without reform	With reform	change %	
Financial Return	0 – 10 % annual	19'097,577	13'636,005	28.6	0.259
Wage & Pension Payment Increases	0 – 10 % annual	11'595,489	7'796,132	32.8	0.218
Additional Working Years	0 – 5 years	4'025,533	1'865,580	53.7	0.000
Worker's Starting Retirement Payment	10,000 – 80,000 \$/monthly	4'227,276	2'103,853	50.2	0.030
Life Expectancy	74 – 86 years	4'663,561	2'435,598	47.8	0.000
Worker's Age at Enrollment	23 – 37 years	4'492,569	2'421,680	46.1	0.000

Fuente: Elaboración propia.

The table does not include the worker's contribution to the pension fund because there was none prior to the reform.

From the table we see that the only variables for which there were no significant differences were the fund's financial performance and the worker's salary increases. However, when comparing their average values before and after the reform, there are differences of millions of pesos, \$5.4 million in the case of financial performance, which represents a 29% decrease and \$3.8 million for the salary increases amounting to a 33% decrease.

In the case of the remaining 4 variables, all differences are significant and the decrease in the liability calculations is of almost 50% after the pension reform entered into force.

## Conclusions

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**T**he pension reform carried out by the UASLP represents a significant reduction in the amount of the contingent liabilities calculated for retiree pension payments.

As has been shown in this study, the contingent liability calculations are very sensitive to some of the variables involved, such as the pension fund's financial performance, as well as the increases in retirement payments. The impact of these variables on the contingent liability calculations is the opposite: it goes up if retirement payment increases and down if the financial performance increases. Since both variables are linked to inflation and the changes directly associated with it, a way to counter greater increases in retirement payments would be to seek strategies to increase the pension fund's financial performance, as UASLP has already done and was previously discussed in this work.

Another two variables that also show similar divergent impacts are the additional years the employee remains working after being eligible for retirement and the worker's life expectancy, with the first variable having a greater impact, so if life expectancy increases a year, it could be offset with remaining active for half a year more. In this sense, flexible retirement schemes could help, specifically in the case of authorities and full-time faculty, who are the highest paid categories and, therefore, are the ones increasing the amount of the institution's contingent liability. They may delay their retirement and work for more years if flexible retirement schemes were implemented. Therefore, a recommended action for the institution is analyzing how to implement such schemes, particularly for authorities and full time faculty.

For the implementation of flexible retirement schemes, these should be defined to meet the objectives of the institution, establish guidelines in accordance with its internal regulations, as well as the requirements to be eligible to choose this option and define how, when and where these flexible jobs could take shape.

The contributions made by workers and the institution to the pension fund have less of an impact on the calculations of the contingent liability, thus increasing retirement contributions, on top of being an unpopular measure among university staff, does not show any considerable effect on the projection of contingent liabilities.

As previously mentioned, the retirement reform has largely reduced, by 45% on average, the contingent liability projections, mainly due to additional working years (3 to 4 more years of work) for reaching a retirement income equal to that of active staff. Good financial management of the UASLP pension fund has also played a role, and to a lesser extent, the contributions made by university employees to the retirement fund.

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