Saving With Gusto

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On current trends most people will not have access to a formal pension. We do not naturally save for retirement. We lack the "chipmunk chip". Today, most elders depend on their family for support, but families are decreasing and disintegrating. Here we explore the alternative of saving for retirement through spending. Not everybody works (formally or not), but almost everybody spends. Thanks to technology is now possible to establish a robust savings platform that enables people to save very small amounts each time they spend. Behavioral economics developments have found ways to encourage people to do so.

Keywords: saving for retirement, saving through spending, behavioral economics for retirement

INTRODUCTION: THE IDEA IN BRIEF

As life expectancy rates increase all over the world, the menace of an epidemic of poverty in the old age looms ever larger in the not so distant future. To ensure sufficient retirement funds for the current working generation is one of the most serious ethical, social and political challenges of our time, along with other intractable problems such as global warming. But unlike global warming poverty in the old age is not a natural phenomenon, nor has anything to do with any natural law. Three major manmade factors contribute to the looming crisis: a political, a financial and a social factor: Politically, we face a fundamental maturity mismatch between the short-term electoral interests of our politicians on the one hand, and the long-term hard choices and reforms that the pensions system requires to be viable again on the other.

Financially, it is unattractive to promote a culture of long-term saving since the systems of compensation for financial performance are mostly orientated to boost short-term sales.

Socially, in addition to the fact that we human beings do not tend to save naturally, we face some other

worrying cultural trends when we try to do it. Three of them are worth considering: the first one is the growing preference for self-employment and job mobility instead of lifelong commitment to a single company, that used to allow workers to save steadily throughout their working life; the second trend is the deep and prevailing distrust of many workers regarding political and financing institutions alike; and the third trend is the promotion of a demanding lifestyle that rewards consumption over saving.

It is impossible to solve the problem of saving for retirement with one single policy; nevertheless we propose a new scheme of saving for retirement through consumption, which could be one significant step (among many others needed) in the right direction. As Shlomo Benartzi said in his speech *Saving for tomorrow, tomorrow* (Benartzi, 2011), the idea is to flip behavioural challenges into behavioural solutions.

Imagine for instance that every time someone pays for a coffee at a restaurant or for a movie ticket a percentage of the amount is automatically wired to a special retirement account; or that each time someone tip a waitress or waiter at a restaurant for her or his services they are able also to tip themselves for their retirement. Imagine saving a "slice of bread for retirement" by buying the product of a recognized brand of bread at the supermarket thanks to its support to a new sort of loyalty program. The customer will not be spending more, and they will be saving by buying their weekly product basket.

The program is already operating in Mexico, it is called *Miles for retirement* and it needed nothing extra to the already existing financial network that connects providers of financial services, retailers and consumers. Only in this case the network helps consumers to save for their retirement as they spend. The hope is that the platform for saving for retirement through consumption will help to bring about a cultural shift in attitudes towards saving and will be part of a new ecosystem that assures financial certainty in the old age.

In this paper we first consider the main challenges for the pension funds in the world. Second, we review some current alternatives for saving for retirement. Then we reflect on the positive impact that fintech is having in some aspects of the financial sector and in the widening perspective of financial products. Afterwards we suggest how to apply some fundamental insights of the behavioral economics to strength systems for saving through consumption. Finally, we explain how these powerful insights are applied in the operations of *Miles for Retirement.*

THE CONTEXT: GLIMPSE OF WORLD'S RETIREMENT PERSPECTIVES

One Old and Many New Challenges

As is well known, Germany became the first nation to adopt an old age social insurance program designed by the Chancellor Otto von Bismarck (OIT, 2009) This insurance was the last of three radical social reforms promoted by Bismarck, the first two being a Health and an Accident Insurance. The aim of these reforms was to alleviate the extreme vulnerability of the new created industrial working class and, by doing so, to ensure the stability of the young German nation. Although many critics at the time denounced these measures as "socialists", they proved to be extremely effective, and so many other governments followed suit short after. We can draw two lessons from this historical consideration: the first is that since then the stability, peace and prosperity of any Nation State has been starkly related to its social safety net; the second is the obvious realization that the system, once innovative and ingenious, had become archaic and unsustainable, and is now in need of radical reinvention. Disregarding their accepted unsustainability, the current public Social Security systems have proven to be very difficult to reform (The World Bank, 1994) In some countries the Social Security system is about to collapse under financial stress; in some others the collapse has already happened (1). The result of the unsustainable designs of these systems has been an imminent era of crisis that threatens not only adults but also children and future grandchildren, who will have to cope with the responsibility of providing maintenance to the elderly.

Each Social Security system has its peculiarities, but they face some common challenges. The most obvious one is the aging society; other problems are the proliferation of both informal and freelance employment, the new era of low growth (that started after the 2008 financial crisis and is now aggravated by the Covid-Crisis), and the impact of automation on the formal job sector.

The Ageing Society and the Public Pensions' Conundrum

The main goals of pension and retirement policies are to provide adequate income in old age while ensuring financial sustainability and maximizing the incentives for people to work in the formal sector. The intensification of population ageing over the next 3 to 5 decades will increase the difficulties for achieving these objectives in major ways (European Comission, 2016) Public Social Security programs were successful at the beginning, when only few reached age 65 and still fewer lived more than 65 years. Plus, in those years, fertility rates reached levels that supported that model. But the last decades have seen a steadily growth in life expectancy rates and simultaneously a diminishing tendency in the fertility rates of all major world economies. Regarding life expectancy two main theories had been developed: some researchers believe that life expectancy will continue to grow continuously and linearly; others expect that life expectancy rates will eventually stabilize since the length of human life should have a natural given limit (Xiao Dong, 2016) But letting this debate aside and focusing on the facts that we know, we have seen already that some countries have surpassed the 65 year old mark and it is safe to assume that many others will achieve the same in the future.

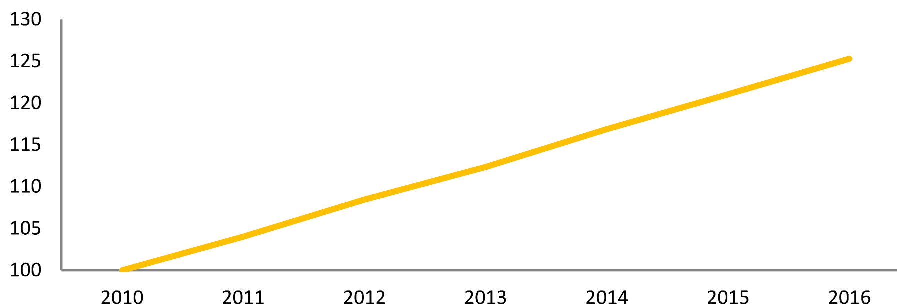
To get a sense of the rapidity of the social ageing process in 1990 almost 500 million people (over 9% of the world's population) were over 60 years old. By 2030 the number of elderlies will rise to 1,400 million (The World Bank, 1994) The transition from large to smaller working-age cohorts resulting from low fertility rates and rising longevity requires adjustments to retirement practices and pension arrangements. Facing these circumstances, we must conclude that many retirement systems still underestimate longevity in their financial projections.

Many countries members of the OECD will in the coming ten to twenty years surpass the "age of indifference", as defined by the economist Hans-Werner Sinn (Sinn, 2005) That is the age distribution by which a reform in the pension system still benefits the majority of the population. Beyond that tipping point the gap between the pensions of retired elderlies and the expected pensions for young workers —who will be paying high taxes to sustain the old pensions schemes— will be enormous, providing fitting ground for intergenerational conflict.

The Pensions at a Glance database of the OECD (OECD, 2016) shows how on average the population of the countries members of this Organization is getting older in recent years (See Figure 1: Index: population older than 85 years of age, OECD) These countries will keep increasing public expenditure in pensions derived from financing the aging of population.

FIGURE 1
INDEX: POPULATION OLDER THAN 85 YEARS OF AGE FROM 2010 TO 2016

Index: population older than 85 years of age, OECD



Source: OECD Database

Adding to this demographic change, public Social Security pensions are rarely indexed to inflation, making long-term benefits clearly insufficient when they are granted to the elderly.

From Unsustainable Pensions to Insufficient Ones

The main problem of the public pensions scheme is mere size —too many retirees with too many guarantees related to the young working population; on the other hand, the problem of the private plans is that they are often insufficient to maintain adequate living standards.

The first private pension plans were established between 1875 and 1929 by some major companies in the United States and Canada (famously American Express was the first ever U.S. company to establish one) (Georgetown University Law Center, 2010) Since 1938, private pension plans started to spread into many other countries. But at least since the 2000s many companies have found that they are no longer able to offer a guaranteed pension plan and accordingly they have changed from a guaranteed to a contribution scheme. The contribution scheme is sustainable in the long-run, but it will not be sufficient for many retirees.

After years of failure prevailing in the public pensions system and the diminishing benefits in both, the public and the private systems, some global organizations made recommendations to establish a three-pillar system: the system of public administration, with mandatory participation; added to the system of private administration; and both combined with voluntary savings.

The tree-pillar system is a good theoretical solution. Nevertheless, we see in practice that many workers do not save voluntarily. Even with all the detailed information and its adequate processing, it would be unlikely for people to take the right decisions in terms of saving. Therefore some researchers of behavioral economics have argued that we human beings often fail to make rational decisions regarding our future, either because of impatience, laziness, inertia or lack of channels that facilitate the optimal choice. (Further in this paper we identify and discuss some behavioral trends that prevent people from saving)

In recent years the three-pillar system has become a multi-pillar system. The multi-pillar system opens extra and complementary ways of saving like microinsurances and insurances for retirement. It also offers platforms for making voluntary contributions to public Social Security systems in convenience stores. Unfortunately, so far the multi-pillar systems have been of little use to promote effectively the habit of saving for the retirement by working populations at a massive scale.

Current Financial Environment and New Difficulties

The current financial environment adds extra burdens to the already loaded public and private pensions systems. Since the crisis of 2008 we entered an era of slow growth and fewer options of investment. Promising in many other senses, the new digital era also generates the collateral effect of rendering obsolete many industrial and even professional jobs through an ever-accelerating automation. Many unemployed will not be eligible to collect any benefits from public or private pension systems. And many workers, who work on a freelance basis or in the informal sector, may find themselves in the same situation.

This implies that the actual number of current contributors to the public Social Security system does not accurately reflect the number of people who will receive a pension, because many of them will not achieve eligibility at the end of their productive but irregular working life.

Informality hinders stable pension schemes especially in many developing countries. Even in environments that have benefited from sustained growth, informal employment is often rising faster than formal employment. According to the OECD, informal employment is pervasive, covering well over a quarter of workers outside the agriculture sectors. In some regions, including sub-Saharan Africa and South Asia, the rate of informal employees is as high as 80% and, for a few countries, even higher.

The vast majority of workers in the informal sector lacks basic social protection and is locked in low productivity activities with scant opportunities for economic mobility and social (Henrik Huitfeldt, 2009) As some authors have also noted, it may be the case that quite a few working people actively choose informality to avoid paying taxes and complying with regulations. Implicitly they opt out of social insurance schemes and other public services that they consider of low quality (Guillermo E. Perry, 2007)

Every viable proposal for voluntary savings must therefore be open to the forma sector (public and private) as well as to the freelancers and workers in the informal sector. The strategy of *saving through spending* address this problematic, since workers in all these sectors spend.

CURRENT ALTERNATIVES FOR SAVING

Experience With Individual Retirement Accounts

Types of Individual Retirement Accounts

The International Social Security Association classifies an individual account as “an arrangement in which capital belonging to an individual person accumulated from mandatory or voluntary contributions is recorded so that it may be withdrawn in the case of a certain specified future contingencies” (ISSA and INPRS, 2003)

In addition to mandatory systems, many countries in Latin America and Europe have established voluntary retirement income plans, called individual retirement accounts. Individual accounts may be divided into three categories: individual retirement programs, occupational accounts and notional accounts. (Kritzer, 2005) The individual retirement programs (also called “personal pensions” in some countries) are funded privately and are pension arrangements of defined contribution. The system, pioneered by Chile, allows workers (and sometimes the employer) to contribute periodically a certain percentage of earnings to an individual account with a public or private asset manager. At retirement, the benefit is based on the insured's contributions plus returns on investments minus administrative fees. In mandatory occupational pension plans, on the contrary, the employers (and sometimes the employees) are required to contribute a percentage of payrolls.

These plans were funded and are mainly used in Western Europe. Finally, notional accounts are hypothetical accounts created for each insured person. They keep the contributions made during the employee’s working life and they are indexed to a particular measure such as wage growth. The pension is calculated by dividing the amount credited to that account by the insured’s average life expectancy at the time of retirement, effectively providing an annuity. This concept was created in Sweden; Poland and Latvia among other countries have adopted the model.

Individual accounts may build the basis of a country’s retirement system or may serve as a complement to the basic public program. Experience with these systems however has neither been convincing nor convenient. Countries that adopted such systems had a high expectation on them at the beginning, unfortunately though, every country adopting individual accounts has encountered significant problems to achieve the desired results (J. Michael Orszag, 2005)

Low Participation and High Costs

The success of every system that relied on individual accounts depends mostly on how many workers participate. In voluntary individual account systems, participation and contribution rates may become insufficient due to low contribution.

As the experience in the US shows, participation in voluntary individual accounts increases dramatically, when workers are automatically included in a 401(k) plan, the same is true in every country or company were the program is established as a default. Similarly, workers are more willing to make larger contributions if they had previously committed to doing so. Automatic enrolment has also been a breakthrough in the UK in recent years.

Factors that lead to higher participation include employer-sponsored programs to promote voluntary saving accompanied by automatic payroll deduction and a complementary voluntary contribution of the employer; also tax deductions on savings or deducibility on employers’ contributions to individual accounts, among other financial incentives offered by the government; as well as offering employees a variety of investment options along with extensive investing education (Wilson, 2000)

Administrative costs also affect asset accumulation: The relevant return for an individual comes after fees and administrative expenses have been subtracted. In most individual account systems, these administrative costs historically have proven to be high. In the UK, for example, these fees used to reduce account balances at retirement up to 30% before the government established fee regulations. In Australia, they could reduce account balances up to 20%.

Most savers have only vague ideas on how much they pay for administrative fees and little knowledge concerning alternatives to manage their accounts; information is indeed provided, but in dense and complex statements unhelpful for the regular worker.

Lack of Knowledge and Abusive Practices

Another significant problem of the system derives from the lack of regulation, laws and policies to promote participation and sufficient contribution rates, along with a lack of regulation and supervision regarding sales and assets management practices of this individual plans.

In the UK Following the implementation of the individual accounts in the second half of 1980s many workers were persuaded by commission-driven advisors to change their defined benefits plans for riskier individual plans with benefits attached to stock market returns. An estimate of five million retired workers had loses of around £11bn. (Tombs, 2013). The episode is known as the mis-selling scandal and it was at the core of major government debates and supervisory measures set by the FCA (Financial Conduct Authority) to protect consumers from such abuses. Again, after the reforms enacted in 2015 there is talk of a "new miss-selling scandal" with up to £50bn transferred from defined benefits schemes to private sector schemes by 2017 (2). This kind of malpractices and abuses are possible also because of the poor financial education of the victims, that usually don't know or care about what kind of assets their savings are invested in, or how and by whom and at what cost are they managed, as long as they get their monthly payments.

Individual Holding Risks and Insufficiency

Unlike public or private pensions plans, in which the government or the enterprise share the risks of saving and investing those savings, individual accounts' risk is taken almost completely by the individual. The amount saved for retirement depends on the amount and frequency of contributions the individual — and in some cases the employer — make. We therefore think that individual retirement accounts should be considered only a complementary part from an integral plan for retirement.

Individual retire accounts are often insufficient to cover the living expenses of the retiree. They vary also greatly according of course with the amount of the contributions but also with the financial returns of the investments and the management fees. Obviously, the higher expected return on savings invested in equities compared with the safer and lower investment return of public managed pensions reflect the riskiness of the individual accounts. These risks are usually exacerbated by poor investment decisions (J. Michael Orszag, 2005)

The current finance environment of low growth and low inflation makes the achieving of sufficient returns particularly difficult.

Changes in Life Expectancy and Payout Phase

In defined benefit systems, pensions are often payable for life. In individual account systems, individuals can purchase life annuities upon retirement, but this purchase is not mandatory in many countries. In such countries, take-up is low, and therefore, annuities markets are small.

On the other hand, mandatory annuitization may not be sustainable, in part because of political pressures to allow accounts to be inherited —annuitizing an account means that the funds cannot be passed to heirs. A further complication regarding annuities is trying to ponder in the price of the annuity the significant variations in mortality among the same population arising from socioeconomic, gender, educational and other differences.

The Chilean Experience

In 1981, Chile started a round of reforms of its pension system and introduced compulsory individual retirement accounts, moving away from public pension systems. Participation in individual accounts is mandatory for new formal workers; whereas affiliation by self-employed or informal workers is voluntary. In early 1990s, ten other Latin American countries applied the same policy. Unfortunately Argentine was

the first to abandoned the compulsory contributions scheme, and returned to the defined benefit pay-as-you-go system as a consequence of the 2008 global financial crisis.

In Chile, contributions were substantially reduced when employers' contributions were eliminated. Employee contributions were set at 10% of their wages plus approximately 2.4% for management fees and insurance premiums. The government still covers minimum guaranteed pensions — 61% of the minimum salary of 1982 — and social assistance pensions.

The retirement age is set at 60 for women and at 65 for men, allowing early retirement to those workers with sufficient balances to fund annuities greater than 50% of their pre-retirement wages, or greater than 50% of the minimum pension. Payment options are annuities, programmed retirement and a combination of both. The value of the minimum pension has been actualized with the Consumer Price Index (IPC). The system is supervised by the Pension Funds Administrators (AFPs).

Problems and disagreements with AFPs erupted when people started to notice that the pension granted for the Administrators after the reforms was insufficient. In July 2016, after 700,000 Chileans marched in protest on the street for better pensions, the Chilean government, led by Michelle Bachelet, announced a plan to gradually increase pensions (15% instead of 10%) through employer's contributions. She also said that AFPs would reimburse management fees to workers when having negative returns on their investments. Some critics pointed out that, while the increase on employer's contributions would favor the most vulnerable sectors, it would not be enough for those belonging to the middle class — middle class workers would continue to slip into poverty after retirement (El Financiero, 2016)

The social conflict in Chile has proved to be long lasting, the problems with retirement funds are not the only cause. Still, countries from the region that recently adopted the system — México, Colombia, Panama, El Salvador, among others — have a lot to learn from the Chilean pioneers.

Microinsurance

What "Microinsurance" Is

There are no precise registers of when the term "microinsurance" was first coined, but the term is common in various publications since 1999. Lately, in year 2005, nearly hundred experts from all around the world gathered in Germany to analyze and discuss the characteristics, opportunities and difficulties that this type of insurance could have.

"Microinsurance" is designed to cover contingencies that people of limited resources may face. Special futures of microinsurances contain small insured sums and small premiums (insured sum must correspond to the assets, while the premium must be adjusted to the low income of a person of limited resources). It must operate with highly simplified mechanisms that significantly reduce management costs. (Churchill & Matul, 2015)

Microinsurance supports population with irregular incomes, working in the informal sector (with no or little access to social security services) and with low financial literacy and thus prompt to financial abuse by loan sharks, for example.

Development

The sector of microinsurance has been growing at a rapid pace. In 2006, 78 million low-income persons from the 100 poorest countries in the world were identified as covered by some kind of microinsurance, the number increased to 135 million in 2009. By 2015 the number approached 500 million risks covered, including lives and health of low-income people, as well as their assets. (Churchill & Matul, 2015)

Growth in microinsurance development is partly attributed to the emerging alternative distribution channels — including retailers, services and cell phone payment companies, cooperatives and syndicates — which provided with new access points to reach the low-income market. Research has shown a positive impact of microinsurances in poor communities. For instance, health insurance has reduced extra costs and have helped increase health services usage. Property insurance, on the other hand, allows entrepreneurs to take greater risks and to invest more in their business. Several studies show a causal link between the development of the insurance industry and national economic development.

Challenges for the Sector

Despite recent developments, this segment of insurances has not reached its potential. Millions of low-income persons still lack access to products that may help them cope with the risks they are exposed to. The refusal of insurers to participate in emerging markets has significant consequences for the insurance industry itself, as well as for the global economy. A variety of challenges and market failures still inhibit the development of inclusive insurance markets. The sector is rapidly growing in countries like India, South Africa and the Philippines but the scope in many other developing countries, where the need to accelerate its development is urgent, is still limited. Actuaries and insurance professionals must work to understand the needs of the low-income segment in order to achieve greater development of microinsurance. In addition, the regulatory environment in many countries is still not prepared to accommodate innovative products or alternative distribution channels for microinsurance.

The last but most important challenge is the lack of financial education. Financial professionals must increase efforts to inform low-income sectors about the value of having insurance. (Churchill & Matul, 2015)

Microinsurance and Pensions

Microinsurance has proved to be an effective tool against significant health, labor and agricultural risk, but is less suitable when applied to pensions: Since the benefits are payable decades after the first premiums have been paid offering micro-pensions requires a high degree of customer trust in providers. Providers also face the difficulty of managing invest to yield the long-term returns that can make future pension payments possible.

Some financial products, offered for example in India, are labeled as "micro-pension" but actually are more like simple savings accounts with a stable yield and no consideration of eventual risks. Contributions are defined while benefits depend on the interest achieved by the insurer with investments in capital markets. In addition, benefits are either lump-sum or annuities paid only until accumulated funds are exhausted (Churchill & Matul, 2015) As a result, customers bear the entire risk of interest rate instability and of their varying longevity. As a product useful for pensions, microinsurance needs many further adaptations to become a more effective complementary tool for social security in retirement.

FINTECH: CURRENT DEVELOPMENTS

As in any other aspect of our daily lives, technology has transformed financial services, including saving. Over the last few years, many fintech (financial technology) startups have emerged. By using technology and big data they enable companies to harness and analyze information in new ways: making it easier to invest, make payments, get a loan and make almost any financial transaction with just one click or touch from a mobile device. To many individual investors with modest financial means fintech has opened accessible options to invest in financial markets.

Financial inclusion is a permanent task for governments, since affordable financial services in credit, insurances and investment are crucial improve the economic conditions of vast segments of the population. Fintech has been a powerful ally for financial inclusion.

Gradually big corporations have developed or adopted better and more sophisticated software that enable them to offer affordable services to their customer customized according to their customers' needs. Fintech is now a billion-dollar industry, but it remains densely populated by startups. And the industry has a long and promising way to go. However, to be effective in solving financial needs fintech requires the cooperation of all the key actors: individual customers, startups, experts, traditional financial services providers as banks and governments.

Accessibility and Inexpensiveness

Fintech has helped to balance the financial services field: Access to services previously reserved for the wealthy are becoming available for far more people. Thanks to technology and data analysis investment

advice that used to be prerogative of the higher income segments, are now becoming available to the general population.

Some fintech startups have capitalized on weaknesses and gaps left by established companies. *Nutmeg* in the UK, for example, provides low-cost online wealth management, making investment expertise accessible to millions of people. Similarly, peer-to-peer lending has established itself as a less expensive way of funding for small business owners or individuals can apply for a loan online, without inefficiencies of time and costs attached to the banking sector.

Established financial services companies are investing in these startups sometimes as means to outsource some technological processes, attract customers, cut costs and increase profits. Some other financial established incumbents companies have created their own fintech projects or branches as well.

Disruption

The Fintech 100 Report announces the world's leading fintech innovators. It includes the leading 50 fintech companies across the globe and the most intriguing emerging ones with disruptive and potentially transformative ideas. (KPMG and H2 Ventures, 2019)

The 2019 report included 22 companies form the Americas (down from 35 in 2016), 25 from EMEA (down from 29 in 2016), 11 in the UK (down from 12 in 2016), 7 in Australia and 1 in New Zealand; and 34 in Asia, up from 14 in 2016 (KPMG and H2 Ventures, 2016) Fintech in China has had an impressive and growth for the last 4 years and India is also making progress.

The sectors analyzed by the report include payments and transaction companies, wealth, insurance and lending companies, neo/challenger banks, and companies that operate across multiple fintech sectors (multi-sector companies).

Insurtech

The presence of fintech in the insurance markets has been growing in the last five years and it is becoming ever more popular. Insurtech targets all parts of the process of selling insurance, from analytics and underwriting decisions, to distribution technology, internet of things for health insurances, and blockchain and bitcoins. However not many insurtech companies underwrite their own policies due to demanding capital requirements and regulatory burden.

Some current trends in insurtech include:

- Temporal car insurances: Policyholders can be insured while driving their own cars or even cars owned by someone else. Such insurances are designed for people that drive infrequently. The process can be all done at an app and it takes around 10 seconds to verify data from authorities and grant the policy.
- Peer-to-peer home insurance: Fast and low-cost insurance for homeowners and renters based on the use of data and behavioral science.
- Health Insurance: Technology and data used to improve the care the health care provider offers to its customers.
- Price comparing and advisory: Sites and apps developed to compare price and quality between insurance policies.
- Blockchain: The technology allows transactions and data to be securely stored in multiple locations. The use of blockchain allows the parties involved in the policy to be linked securely and cheaply.
- Brokerage services: Acting like an insurance broker, some startups sell insurances and pass the risk to traditional companies in an easy to buy way via social networks.

Through reducing red tape, simpler and lower flat fees, efficient payout claims, and even social responsible measures as given some of the earnings to charities, insurtech will help the insurance sector to regain some of the lost customers' trust.

Cross-Border Transfers

According to The World Bank, an estimated of $551 billion in money transfers was on track to be sent las year to low- and middle- income countries, primarily by hard-working migrants who send money home to support their families (World Bank Blogs, 2019) (3)

For years this market was dominated by big corporations and some banks, incumbents charged on average from 7% to 9% to send money abroad. Fintech has brought to the field many new smaller providers and drastically reduced costs. (Kent, 2015)

Transferring money between accounts, especially between international accounts, have been for years costly and troublesome. With the help of mobile phones fintech has dramatically improved the speed, reliability and accessibility for such transfers.

Startups for money transfers have been multiplying, fueled by consumer demand, ever increasing connectivity, and investors eager to profit from their growth. Fintech companies have also been instrumental in bringing access to a bank account to adults around the world previously unbanked. It is estimated that 1.7 billion adults lack a bank account, a sector overrepresented by women worldwide (Findex, 2017) Advancements in digital technology allowed these startups to move faster than the traditional banks, while access to analytics and data allowed new firms to serve more efficiently their customers' needs.

Some technological innovations or improvements in cross-border transfers include:

- Breaking codes: Some cards and even mobile apps allow users to collect money at ATM's without having a bank account.
- Low fees: Money transfer services have become affordable for more people.
- Stronger security measures: Development of systems that maintain transfers and personal information safe.
- Accessibility: Mass-payout companies that provide solutions to both, big and small companies, to make and receive payments from more than 200 countries around the world.
- Social Networks: to connect senders and receivers for example through their Facebook friends list, enabling them to have more confidence exchanging information and immediate links to the transfer details.
- Geographical expansion: Some companies offering safe and reliable money transfers to underserved communities all over Africa.

Peer Lending

Fintech has also had a significant impact in lending practices across the world. For many kinds of borrowers, banks have long been the only option available for credit. As a consequence of the 2008 global financial crisis banks were reticent to lend. Many entrepreneurs and small business were therefore excluded de facto from credit markets. Through fintech tools new options have appeared in the last decade. For instance, online peer-to-peer lending is now common in refinancing student loans in the US. The refinancing comes usually with improved risk assessments mechanism and financial advisory for graduates and students to help them to better manage their loans. Peer lending fintech startups have been innovative in:

- Ease and price: Borrowers access low interest rate loans through fast, easy and transparent online or mobile interface.
- Time efficiency: Lending can be done in less than 24 hours with some platforms.
- Credit scoring technology: Machine learning, big data and other technologies jointly working to evaluate individuals or businesses to assess risks and provide fast and flexible financing.
- Pay loans through payroll: In the US student loans being paid from the employer's salary as if it were a 401(k) deduction.
- Project lending: Startups select projects and help entrepreneurs to find investors willing to finance the projects. In return the startups acquire the right to claim a percentage of the variable income earnt by the projects. The process works similarly to a Development Capital Certificate.

- Helping traditional companies get cheaper and quicker lending.
- Peer cash lending: Using GPS technology, lenders and borrowers can find each other physically and exchange cash needed at that moment that will be payed with bitcoins later on.
- *All in one*: Lending start-ups offer a palette of financial services such as financial advisors, asset managers, funds sales platforms and credit bonds.
- Home loans: Access to home loan deals using connection to verified mortgage brokers who can further negotiate a better rate for the lenders to save time, hassle and money.
- Customer experience: Plus being easier, cheaper and faster than a banking service, some start-ups offer customers services based on their needs, with expert advisors answering questions 24/7 through the platform.

Robo-Advisors

Roboadvisors are one of the largest areas of fintech. They consist of online investment services that work through users' information gathered with an easy to fill questionnaire and then rely on algorithms to come up with the optimal investment plan for them based on risk tolerance and time horizon.

As new generations begin to invest or plan for their retirement, it is likely that gradually a significant number of investments will be made without ever talking to a person.

Some benefits of robo-advisors are:

- Fewer requirements: Many providers do not require minimums of investable assets to open an account.
- Accessibility: There is no need to meet the advisor personally or go to a filial.
- Low costs: Often, the algorithm chose low-cost investments such as index funds or Exchange Traded Funds (ETFs) to keep lower fees.
- Automatic asset allocation: Periodically rebalancing and asset allocation are performed automatically.
- Entertaining: With avatars or characters of the customer, trackers of the investments with interactive graphics and charts, and thematic investments (4).

Saving

For decades saving has been a sector with little margin for innovation. A variety of options especially in the micro saving segment have developed in recent years. Alternatives that allow users to save even small amounts. Everybody benefits when societies save more: more capital means more possibilities to create and develop businesses, support healthcare, face emergencies and prepare for retirement.

New ways of saving that are becoming popular between new and old generations include:

- Saving customized for kids: Apps for kids and younger adults (such as *Spriggy*) that help parents and young people to manage the account together. Apps allow parents to easily transfer money into their kids accounts and follow transactions with the same Apps.
- Automatic saving: Linking an App account with the individual's checking account and pulling out money from it periodically or with a trigger that detonate the action.
- Learning and establishing personalized saving patrons: Some Apps encourage saving by pushing notifications and setting goals periodically, while helping users to better understand their spending and saving transfers.
- Easy transfers: Transfers to the savings account can be made with a text message only and other easy alternatives.
- Saving plus financial education: Some platforms offer small informal courses and events to improve financial education of their users.
- Security: Bank level security and insurance for funds are being implemented for these saving Apps.
- Saving through consumption: Algorithms monitor spending behavior and allocate defined percentages of the total spending to be sent to a savings account.

Fintech improve saving conditions related with ease, time, knowledge, advice, and costs. It promotes more and more intelligent saving.

CONTRIBUTIONS THROUGH CONSUMPTION: SUCCESFUL EXPERIENCIES

Financing Social Expenditures Through Consumption

The Inter-American Development Bank (BID) confirmed in 2013, after analyzing Latin America's labor perspectives, the theory that substituting social contributions for consumption taxes could have positive effects on the level of formal employment and the competitiveness of the economy. (Inter-American Development Bank, 2013) The central recommendation was to reduce the large amount of burdens to formal work because of its negative effects on the formal labor. In that sense, they proposed to search for alternative ways of financing, such as taxes on consumption. A year before, Bird and Smart (Bird & Smart, 2012) had constructed a simple formal model that indicated that a revenue-neutral move from payroll to value-added taxes will reduce informality and increase wages, output and welfare. The analysis suggested that in countries with large informal sectors it is probably best to finance incremental expansions of social programs from broad-based taxes like VAT instead of payroll taxes.

Loyalty Programs

For years, retailers have been valuable source of fundraising for associations, organizations or foundations with programs of donations for charities through consumption. Other examples of contributions through consumption are loyalty programs, a way to reward the consumers and encourage them to repeat the purchase.

In an increasingly competitive market, where people have a wide range of products and services available, loyalty programs have become a useful way to gain some competitive advantages.

Additionally, to buying products constantly, loyal customers promote the brand. Loyalty programs grant personalized benefits and make the consumer feels part of a privileged group. Payback, for instance, (a German loyalty program acquired by American Express in 2010) aims to reward people who make their purchases frequently in the same place. Payback includes major brands within its network, including supermarkets, retailers, convenience stores, gas stations, airlines, telephone companies and off course American Express. By presenting the Payback card in affiliated establishments, customers accumulate points that they can later use either to pay part of their purchases or the whole of them in the same companies. Affiliated companies gain access to key customer information such as tastes, expectations and spending patrons. This information helps the companies to offer better products and benefits to continue building loyalty to their brand. A case in point is Cinepolis a Mexican movie theater chain, has developed a successful loyalty program (*Club Cinépolis*) that gives its beneficiaries 5% to 15% of their purchases in points that can be later used to buy tickets or snacks at any of their theatres.

Charity Contributions

Charity programs are operated with the goal of permanently accumulating many modest single contributions. Such programs rely not on the amount donated by each individual but on the number of individuals that donate, by doing so they can raise huge funds by many people who donate just a small amount of their income.

Usually, these charity programs use a scheme known as "rounding". Rounding is when an establishment launches a campaign to invite the customer to donate the cents required to reach the unit of the total payment, so that if the total amount to pay is $14.70 USD, the cashier may suggest to round up the amount to $15 USD, donating 30 cents to the social cause the supermarket or retailer is supporting. The chosen foundation receives at the end of the campaign or periodically the sum of the cents donated to support the programs and services offered by the foundation. For the consumers, it feels good to donate and it does not affect their overall budget. Supermarkets, department stores and other retailers are the main places for consumption, therefore are suitable to attract big numbers of consumers and donations. This kind of micro

contributions programs are also commonly supported by convenience stores and banks (which raise funds from ATMs).

These charity programs are popular in many countries and have been used to raise funds for education (developing infrastructure for schools, scholarships or creating new schools in marginal regions), nutritional programs, for specific health treatments, and to provide essential services to the elderly or to people affected by poverty.

If charity programs through consumption work and make the consumer feel good for giving, why making donations for one-self to save for retirement would not?

BEHAVIORAL ECONOMICS FOR RETIREMENT

Psychology and Economics

Behavioral economics studies the effect of psychological, social, cognitive and emotional factors on the economic decisions of individuals. During the classical period of economics, some studies on microeconomics were closely linked with psychology (5). However, neo-classical economics branch came to reshape the discipline taking economic behavior as fundamentally rational. Even so, there were several psychological explanations employed by economists at that time.

Economic psychology emerged in the 20th century. Expected utility and discounted utility models began to gain acceptance assuming uncertainty and intertemporal consumption, respectively, as behavioral factors. Further steps on the field were taken by Nobel Prize winner Maurice Allais, who contradicted expected utility hypothesis.

In the 60's, cognitive psychology (6) started to gain popularity and specialists in the field like Amos Tversky and Daniel Kahneman (Nobel Prize winner, and author of Thinking Fast and Slow) began to penetrate in the economics field by comparing their models to economic models of rational behavior.

The combination of psychology and economics is now accepted in both fields and it is common to think about them not as opposite but complementary, for the main reason that economic decisions are biased and among all, substantiated by individuals' behavior.

Behavioral (Non) Saving

We human beings often fail to make rational decisions regarding our future. Many explanations have been given to that natural pattern, some of them offered by behavioral economics (see the excellent contribution by Akerlof & Shiller 2015) It has been difficult to turn some insights of the behavioral economics into good public policies, but one dramatic success illustrate the potential of behavioral economics, and it is precisely in the field of pensions and savings.

Professor Shlomo Benartzi applies a combination of psychology and economics to help solve big societal problems. In his TED Talk, *Saving for tomorrow, tomorrow* (Benartzi, 2011), Benartzi explains the behavioral challenges that prevent people from saving. According to Benartzi's discoveries, self-control is not a problem in the future but a problem of immediate gratification or present bias. We are all aware of the need to save, we think about it every day but we end up spending instead. Daniel Kahneman has also proven this thesis with alternate psychological theory. Unfortunately, knowing these facts is not helping people to save more and the problem of nudging people into the saving habit remains.

SAVING THROUGH CONSUMPTION: FLIPPING BEHAVIORAL CHALLENGES INTO SOLUTIONS

Although we are adverse to saving by nature, there are ways to modify behavior to promote saving by giving the right motivations and stimuli. Saving trough consumption takes our enjoyment for spending and *tinkers* it in order to save. Two examples of already operating schemes are *Pensumo* in Spain and *Miles for Retirement* in Mexico.

Pensumo

Pensumo is a Spanish service company in the line of collaborative economy and shared consumption that has been successful in recent times. It associates costumers and merchants for the benefit of both. The customer obtains a percentage back of the total amount of each purchase, and the sellers also contribute a percentage of their gains to the savings plan of the buyers. The platform works at the same time as a loyalty program and a mechanism to save. The consumer can access their savings account through the Pensumo app in a smartphone.

Pensumo is associated with the insurer Allianz, the insurer generates the policy and guarantees the savings of Pensumo affiliates. The widespread use of this system could in time bring about a new pillar for the pension system complementary to that of Social Security (or others in Europe), with a very low cost and with the consent of the beneficiary.

However Pensumo has some limitations in part derived from the Spanish pension system but also arising from some technical issues:

The Spanish pension system has no individual savings accounts, and so the Pensum account is not properly an individual pension account. Savers can withdraw their money every five years with no penalization, and after a year with penalization.

The are some technical nuisances as well: Pensumo is affiliated with many small businesses, each time the consumer buys something at the retailer they have to take a picture of the sales ticket with the Pensumo app i.e., the transaction is not automatically registered. And by online shopping the consumer has to buy everything through the Pensumo online platform (ComprasPensumo.com) ***and*** after the transaction they have to send a confirmation email to a given email address. These complications make the buying and saving experience less enjoyable.

Miles for Retirement

A significant number of the population save insufficiently for retirement due to a variety of reasons, — human nature, lack of income, a planning horizon that does not contemplate savings for the old age, absence of attractive savings products, labor informality, etc. Miles for Retirement promotes saving through spending using the connectivity already available. It is a simple but potent scheme to motivate every spender to also save a little for retirement *when* spending. It opens the opportunity to save at every payment.

It starts when the user — with a previously existing account in a Retirement Fund Administrator (mandatory for every formal worker in Mexico), an insurance for retirement, a savings bank account or any other savings product, or a combination of them — registers his or her credit or debit card in the Miles for Retirement platform. The person also provides some information to make domiciliation and link the card with the savings product that is usually the individual retirement account. The person then defines a program of voluntary saving, determining a percentage of their spending or a fix amount to go with every payment. The app also allows the user to spontaneously add a small amount to their account by simply pushing a button.

Once registered, each time the person makes a purchase and pays with the credit or debit card, she or he automatically sends to her or his savings product a proportional part of the amount spent. The interactive app periodically connects to their bank statement, multiplies the proportional part of the amount spent, and makes the transfer to the savings account or insurance.

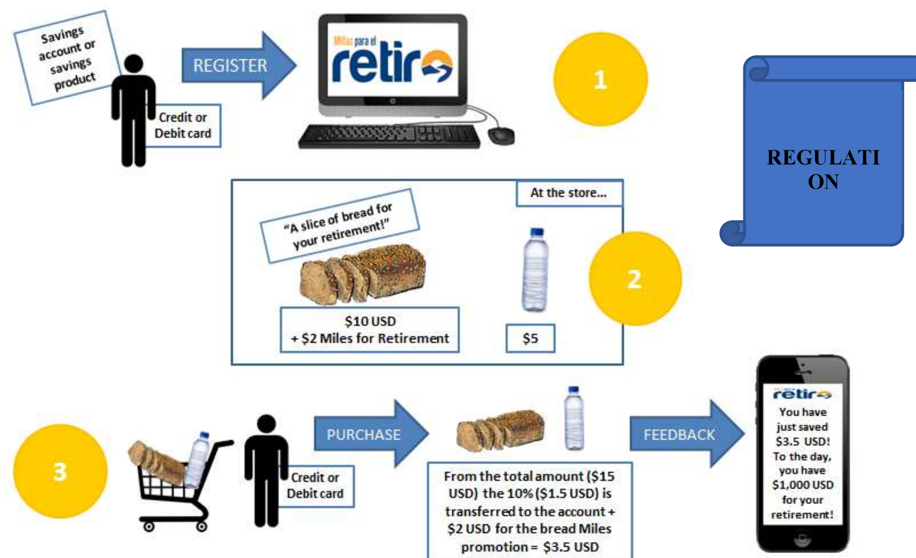
Extra saving is always possible via credit card, debit card or even cash at Points of Sales. The option of the Points of Sales is of special interest, since at those points retailers could encourage consumers to make more contributions to their retirement accounts by routinely asking customers if they want to do so.

Constant feedback through push notifications at the mobile phone guarantees transparency, extra motivation, and advertising opportunities for associated business; the same push notifications inform about constant talks, interviews and capsules promoting a new savings and investment culture. The user gets continuous feedback and reminders that encourage them to accumulate more "Miles". Rewards such as special promotions from the network companies or the opportunity to withdraw a percentage of the savings depending on the amount saved in the medium and short-term are also part of the future development project.

Behavioral experiments have found that we suffer when we lose something that we previously possessed. We hate losing things, even if they do not represent something important. This concept is known as loss aversion. The displeasure that almost everybody feels by seeing tax reductions to income is a case in point. Miles for Retirement avoids presenting the savings as a deduction on the payroll; much to the contrary the program emphasizes the growth on the savings account.

The program already offers some special discounts and other promotions with associated businesses. And the idea is to establish much broader alliances with retailers, supermarkets and brands to further stimulate saving when spending: So, for instance, it may soon be possible to save a "slice of bread for retirement" by buying the product of a recognized brand of bread. That "slice of bread" would be converted into a proportional amount of the bread cost that goes directly to your savings product. The same could happen with an entrance to the cinema, with purchases of clothes, shoes, cell phones, luxury items, tickets to concerts, altruist donations, or whatever the individual pays for. (See Figure 2: Miles for Retirement operative flow.)

FIGURE 2
MILES FOR RETIREMENT OPERATIVE FLOW



Source: Own authorship.

The platform connects providers of financial services, consumers, and retails in order to save. Access to it is available for almost every person with a mobile device or computer and a credit or debit card. Coupled with state of the art fintech, Miles for Retirement allows the costumer to follow in real time how their savings are growing. It also lets the customer track her or his savings' trends and to define clear savings' objectives.

The operation has no political cost attached since it is not mandatory, and it taxes neither income nor consumption. To start operation in 2017 it required no changes in the existing regulation. Financially, it is a low-cost platform that allows people to save proportionally with their spending and make voluntary contributions, while it opens new opportunities for business for encouraging a social desirable goal (saving for retirement) while promoting life time brand engagement.

As of July 2020 the Miles for Retirement app has 180 thousand downloads. From those downloads 50 thousand persons have already registered to receive loyalty savings: through the app they can transfer money into their retirement accounts and take deposits from third parties; an additional 10 thousand users have registered their credit and debit cards to direct voluntary savings by each payment along with monthly fixed voluntary contributions and spontaneous contributions.

With less than two years operational and with an initial founding of half a million dollars Miles for Retirement is positioned to become a new model for voluntary saving through consumption for retirement.

CONCLUSIONS

Generating the conditions for a dignified life at the old age is an epochal challenge. The malaises that affect public and private pensions schemes have been over diagnosed for years. Technology and a better understanding of human behavior should be used to promote new alternatives for saving for retirement.

Miles for Retirement is the first company to pay for long-term savings through spending, with the explicit aim of improving the economic conditions for the elderly, the elderly of today and the elderly of tomorrow. The platform uses the pleasure of today's spending, instead of the pain of saving; the pleasure of anticipation to promote saving as an investment for the personal future, and not as a deprivation of current wants; it acknowledges our soft spots and weaknesses and play them to our advantage. Once in place, the saving process is automatic, digital, affordable, easy to use and easy to understand, with no strings attached and no hidden management fees. The idea behind it is simple and powerful, and the technology is already in place in many countries.

Miles for Retirement alone will not end with the pensions' problem, but it will function optimally as a complement to other retirement solutions and as an incentive for entrepreneurs and incumbent to innovate for the sake of saving.

ENDNOTES

1. Japan has encountered the dark side of a society in which the elderly outnumber young population and in 2016 Japan's public Government Pension Investment Fund (GPIF), lost fifty billion dollars for decrease in contributions and outperformance. Due to the dynamics in fertility, life expectancy and migration, the age structure of the European Union population will change strongly in the coming decades. As a result of these different trends, the demographic old-age dependency ratio (people aged 65 or above relative to those aged 15-64) is projected to increase from 27.8% to 50.1% in the E.U. The long-term budgetary projections show that population ageing poses a challenge for the public finances in the E.U. The fiscal impact of ageing is projected to be high in most Member States, with effects becoming apparent already during the next decade. (European Comission, 2015) In the U.S., there simply is not enough money out there to keep all of the pension commitments that have been made. From coast to coast and in the years ahead millions of elderly Americans are going to be affected by broken promises and vanishing pensions. The case of Greece with several cuts on pensions after being pressed to slash its expenses is another example of bad practices that lead to a collapse.
2. See the extensive coverage of the issue by Financial Times Series "The great British pensions cash-in". As recently as June 2020 the Financial Times reported that the FCA is taking enforcement action against 30 business related to pension transfer miss-selling: apparently many financial advisers only get paid if the customer follow their recommendation of trading a defined benefit pension for a cash lump sum. See Cumbo, J. (2020, June 5)
3. Before the Covid pandemic hit, it was estimated that remittances would reach $597 billion by 2021. In April this year however the World Bank projected a sharpest decline in remittances, a fall of 19.7 percent to reach only $445 billion compared with 2019 (World Bank, 2020) The definite number could be much worse.
4. Thematic investments platforms allow customers to act on investment desires. Customers act by purchasing a thematically weighted portfolio of up to 30 securities built around a concept and created by even an internal research team or by other customers.
5. Already Adam Smith in his classic treatise The Theory of Moral Sentiments explained individual behavior and public choice using psychological concepts.
6. The study of mental processes such as attention, language, memory, perception, problem solving, creativity and thinking; processes usually linked with other disciplines like educational psychology, developmental psychology, decision making, social development and economics.

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