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SELFIES CAN HELP BRAZIL CREATE A SUPER SUPPLEMENTARY PENSION

ROBERT C. MERTON

Ph.D., Nobel Prize recipient in Economics

ARUN S. MURALIDHAR, PH.D.

ALEXANDRE VITORINO M.SC.*

ABSTRACT

Brazilian policy makers and researchers have discussed the introduction of a complementary pension system to complement the Regime Geral de Previdência Social (RGPS), specially for those that want a retirement income above the RGPS ceiling. This article first recommends that the complementary system must be SUPER (Simple, Universal, Portable, Efficient with low cost and Robust Regulatation). It then proposes the adoption of a financial innovation called SeLFIES (Standard-of-Living, Forward-starting, Income-only Securities), as the default investment option for a modern capitalization regime. Brazil presents an interesting opportunity to be the first country to adopt and implement SeLFIES given the initial conditions, especially the innovations introduced in the market for government bonds. This financial innovation would help the Brazilian government address two challenges simultaneously: improve retirement security (by including even the most financially illiterate people and those in the informal sector in retirement plans) and boost infrastructure financing.

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* Robert C. Merton, Ph.D., recipient of the 1997 Alfred Nobel Memorial Prize in Economic Sciences, is the School of Management Distinguished Professor of Finance at the MIT Sloan School of Management. He is also Resident Scientist at Dimensional Fund Advisors, a global asset management firm headquartered in Texas, and University Professor Emeritus at Harvard University. Arun Muralidhar, Ph.D., is founder of M^{cube} Investment Technologies and AlphaEngine Global Investment Solutions. He has served as a manager in the World Bank's Treasury Department, and is author of, "Fifty States of Grey: An Innovative Solution to the DC Retirement Crisis." Alexandre Vitorino was CIO at Votorantim Asset Management, represented AMUNDI in Brazil, Corporate Bond Portfolio Manager at Safra Asset and has a Master Degree by Universidade Federal de São Paulo (UNIFESP). These are the personal views of the authors and do not reflect the views of any of the organizations or universities with which they are associated

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At the recently concluded 2nd Seminário Internacional de Previdência Complementar in Brasília (organized by Ministério da Economia), international and Brazilian experts discussed many of the challenges and opportunities that Brazil faces to introduce a complementary, individual, capitalization system. Foreign systems have struggled with high fees, insufficient savings, improper risky investments, financially illiterate populations, lack of coverage of people in the informal sector and the self-employed, lack of portability, and risk-based regulation, resulting in low retirement incomes and unexpected declines in the standard-of-living of retirees (Modigliani and Muralidhar 2004; Muralidhar 2018). However, the Brazilian government can overcome these challenges and create a S.U.P.E.R. (Simple, Universal, Portable, Efficient with low costs, and Robust Regulation) complementary system with a single financial innovation, that can also address another challenge Brazil faces (Merton and Muralidhar 2017a). We call this innovation "SeLFIES"—Standard of Living indexed, Forward-starting, Income-only Securities, as described by Merton and Muralidhar (2016, 2017b, 2018, 2019). Brazil is uniquely positioned globally to introduce both the SUPER complementary system and SeLFIES because Brazil has successfully implemented financial innovations such as Tesouro Direto[1], (Brazil 2020a), and has created a liquid, efficient, and long maturity IPCA-linked market (Brazil 2020b). The SeLFIES bond would be a low-cost, and liquid safe asset for every retirement saving portfolio, helping Brazilians to complement (not substitute for) the Regime Geral de Previdência Social (RGPS) income. SeLFIES would also help Brazil fund its infrastructure needs, thereby addressing two challenges with one innovation, as Merton and Muralidhar (2016, 2017b, 2018, 2019).

To ensure retirement dignity in Brazil would ideally require that citizens receive a guaranteed, real income, from retirement through death, and the ability to live a lifestyle comparable to pre-retirement. Patricia Linhares, quoting a Mercer study, and highlighted in Temóteo (2017), noted that 73% of Brazilian retirees polled had indicated that their retirement lifestyle was worse than their pre-retirement standard-of-living. The Brazilian government would surely like to ensure that individuals can make intelligent financial decisions, and accumulate a retirement nest egg without being dependent only on the government for support. Typically, Brazilians that would like to have a supplementary income over the RGPS pension, are unable to save for retirement because of the absence of simple retirement schemes, and even those who participate in retirement plans are often not sure about the decisions they have to make about accumulation and decumulation because current defined

[1] Tesouro Direto is a Direct Sales Program of Brazilian Government Bonds to individuals and it has surpassed 5 million investors registered since September 2019 (Brazil 2020a).

contribution products are risky and complex, and require greater financial sophistication than savers currently have. The complexity of retirement planning leaves many confused about what constitutes adequate savings for retirement as current statements informs participants about the wealth they accumulated and not their potential standard-of-living, which they easily relate to. Individuals are overwhelmed by the information provided on rates of return of various investment options and the absence of a robust and uniform method to convert the wealth number into a standard-of-living estimate (Merton 2007, 2010, 2012, 2013). Moreover, there is uncertainty over what to invest in and how best to decumulate (Merton 2014a, 2014b). Globally, most adults are not equipped and do not have the data to answer questions about compound interest, the effects of inflation or the benefit of diversification, as demonstrated by Lusardi and Mitchell (2011). In sharp contrast, the average citizen does not need extra training and instructions when they buy a new cellphone (because it is designed to be used based on what they already know); the same design elements must be incorporated for the complementary system and any new financial instrument to be offered as the default asset.

Additionally, investing in existing financial offerings is risky relative to the retirement standard of living objective, because these products or securities fail to provide a simple or low-cost cash-flow hedge against the goal of securing retirement income, as in Muralidhar, Ohashi and Shin (2016). Even a portfolio of traditional, “safe” government securities (typically favored in other Latin American countries), unless heavily financially engineered—at material cost—would be risky because of the cash flow, and potential maturity, mismatch between traditional bonds and the desired retirement income stream. As a result, they provide highly risky retirement income outcomes and fail the “cell phone” test. Others developed countries struggle with similar issues. Global complementary arrangements (e.g., USA and Australia) are based on traditional bond/equity portfolios in the accumulation phase, with the expectation that individuals will acquire annuities at retirement. Annuities are typically the only financial services product that can provide a guaranteed lifetime income stream, but annuity markets are not sufficiently deep or developed in Brazil. More importantly, there are no long-deferred annuities that can be purchased during the accumulation phase that lock-in guaranteed income at retirement just like a pension system does. Furthermore, annuities are acquired mostly at the final stage of accumulation phase, when the accumulated amount is transformed into retirement income but this is too late to adjust savings in response to unfavorable interest rate changes. Both before and at retirement, many hesitate to buy annuities because they can be complex, opaque and illiquid; investors fear not being able to bequeath the annuities to heirs, Muralidhar (2015) and Mitchell, Poterba and Warshawsky (1999). Once again, these systems fail the “cell phone” test.

SeLFIES address these issues because it passes the “cell phone” test. To demonstrate that SeLFIES can cater to even the lowest income and least financially trained individuals in Brazil, consider the following SeLFIES design as first articulated in Merton, Muralidhar and Vitorino (2020): Brazilian SeLFIES start paying investors upon retirement and pay real coupons only—say, R$ 0,04/month —indexed to aggregate *per capita* consumption—for a period equal to the average life expectancy at retirement, e.g., another 250 months. In short, investors will receive R$ 10 in “units of consumption” over the life of the bond. Instead of current bonds in the Brazilian market that that are either nominal or indexed solely to inflation, the ideal SeLFIES bond would cover both the risk of inflation and standard-of-living improvements. SeLFIES are designed to pay people *when* they need it and *how* they need it, and greatly simplify retirement investing.

Individuals already know the key aspects needed to make an informed decision about how many SeLFIES they need for retirement security: their anticipated retirement year, and what income they currently need to sustain their standard of living. Imagine a 55-year-old today. They would buy the 2030 bond, which would start paying coupons when he turns 65 (the age of retirement), in January 2030, and keep paying for 250 months, through November 2049. If he wants to guarantee R$ 1.600/month as a complementary retirement income, (or approximately 1,5 minimum wages), risk-free for 20+ years in retirement, aimed at a desired standard of living, he would need to buy 40.000 SeLFIES—i.e., R$1.600 divided by R$ 0,04—over his working life. SeLFIES can be purchased by all citizens (even in the informal sector and self-employed) and require no further calculations or financial education. If SeLFIES are the default asset in the new complementary system, the system can be both “Simple” and “Universal”! The monthly statements from the complementary system can easily and transparently inform individuals on the retirement lifestyle they can expect based on the SeLFIES they have purchased. The complex decisions of how much to save, how to invest, and how to draw down are simply folded into an easy calculation of how many SeLFIES to buy to meet this objective. For example, if the individual owns 30.000 SeLFIES, then they have locked in 75% of their goal or R$ 1.200/month.

Policy makers should design a SUPER complementary system that recognizes that this is the extent of individuals’ financial capabilities and not require individuals to engage in complex financial decisions or have to learn new financial terminology or skills (Merton 2010, 2014a, 2014b). Introducing SeLFIES to the market allows for such an effective design as it demystifies retirement planning by combining accumulation and decumulation into a single instrument (Muralidhar, Ohashi and Shin 2016). SeLFIES payments are denominated in income, and the individual can immediately understand and contemplate the standard of living associated with the amount of income paid by the SeLFIES they own. As a result, doctors, pumpers, policemen, teachers etc. can decide by themselves to either save more, take some risk (by investing in other assets) or lower their retirement lifestyle expectations before they reach retirement. They can be independent of the government as SeLFIES were designed to be "used out of the box".

Further, SeLFIES, being linked to *per capita* consumption, give individuals a higher likelihood of maintaining their desired standard-of-living during the retirement period than an inflation-linked bond, Merton (1983) and Merton and Muralidhar (2019). This is a critical issue because one cannot expect retirees to reduce their standard of living post retirement, which has been the case globally. *Per capita* consumption measures both consumption inflation and the changes in standard-of-living in an economy by capturing how the level of real consumption of citizens changes (Merton 1983). Linking SeLFIES to just inflation would only work if there are no changes in the overall standard-of-living, which for young people in Brazil is an especially poor assumption, as their retirement is often 30 to 40 years in the future.

Muralidhar (2018) highlights how SeLFIES as the default asset makes the system "Portable" across jobs, geography etc. and it can also be bequeathed to heirs who can either sell SeLFIES or collect the remaining coupons. The key issue to note is that SeLFIES will not be subsidized, but will be a pure market-based instrument; traded and issued like any other Brazilian government bond. SeLFIES will be issued through the traditional auction process, and traded in the aftermarket. The primary participants in these auction and secondary markets are large institutions like insurance companies, pension funds, and asset managers, and this current market-based process ensures effective price discovery. Thereafter, the market-based prices can be used as the basis for Tesouro Direto, which is a low cost channel for individuals. This transparent price discovery process ensures that the prices at which SeLFIES are sold to individuals directly are not subsidized or have to be rationed, at market price. Adopting current bond issuance processes for SeLFIES ensures "Efficiency". Furthermore, if SeLFIES are designed with a payment period somewhat longer than life expectancy, they can also improve the hedging of longevity risks as a well-run insurance company should be willing to take one SeLFIE in exchange for a life annuity that provides the identical retirement income level, making the transformation to longevity protection seamless for those who want it (Merton and Muralidhar 2019).

SeLFIES are a good deal for governments too, as shown in Merton and Muralidhar (2018) and Merton, Muralidhar and Vitorino (2020). In fact, governments are the biggest beneficiaries. SeLFIES not only improve retirement outcomes for all citizens saving for retirement, but also have spill-over benefits. Individuals investing in current Treasury bonds are taking risk relative to their retirement income goals and if they retire poor, then the government will have to bail them out. As a result, even swapping current bonds for SeLFIES can lower the risk of the retirement system to the benefit of the government. Second, cash flows from SeLFIES reflect synergistic cash flows for infrastructure spending: namely, large cash flows upfront for capital expenditure, followed by delayed, inflation-indexed revenues, once projects are online. Third, SeLFIES, if linked to *per capita* consumption, gives the Brazilian government a natural hedge of revenues against the bonds, through the Federal and State Goods and Sales Tax (GST). Fourth, it allows Brazil to improve its domestic investor base for its debt, thereby insulating Brazil from changes in global risk aversion (and fleeing foreign investors in times of stress). It also leverages the existing effective bond issuance and trading infrastructure created by Tesouro Nacional. Fifth, issuing SeLFIES will also allow for the development of better pension products by innovative asset managers, insurance companies, banks and pension funds since they would invest in such bonds, so they can hedge their liabilities from annuities or life income instruments they issued (and allow for “Robust Risk-based Regulation”, based on the volatility of the future real income generated by the retirement plan).

The looming retirement crisis needs to be addressed by timely innovation, especially in a fast ageing population like Brazil. It is a chance to Brazil to continue its impressive record of financial innovation and be first country in the world to issue SeLFIES, thereby creating a state-of-the-art complementary pension arrangement, and funding infrastructure. It is a market solution without cross subsidies or opaque rules, and it can be created immediately, at low cost and used “out of the box”. With SeLFIES, Brazil can create a SUPER Previdência Suplementar!

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