Investigating the introduction of fintech advancement aimed to reduce limited attention regarding inactive savings accounts – data, survey, and field experiment

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We study the introduction of a free government online service to increase attention to inactive and forgotten retirement savings accounts. As policy makers have shifted responsibility for retirement savings from governments and employers to individuals, behavioral biases and higher turnover in the job market may cause many to lose track of some retirement savings accounts. Inactive and forgotten accounts are often small, but across the population they sum to significant amounts of money. For instance, in the US between 2003 and 2014, 25 million retirement accounts became inactive because of job separation. 16 million of them, with an aggregate value of 8.5 billion USD, had funds under 5,000 USD.[1] In 2019 in Israel, around half of the accounts in pension funds are inactive and at risk of being forgotten (CMISD annual report 2019). Countries have different approaches for dealing with inactive accounts. For example, in the United States and United Kingdom, companies are creating databases of inactive accounts. However, for-profit solutions may be costly and they may not be able to access information from all providers.

We study two data sets (proprietary data from a provident fund provider of over 12,000 eligible accounts and survey data that is nationally geographically and demographically representative).

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[1] Conversion for NIS to USD in all the paper was done using an exchange rate of 3.5.

We also conducted a field experiment. We find that after the campaigns, inactive retirement accounts still only received limited attention. This is more pronounced for individuals with low socioeconomic status and low financial literacy. The results of a controlled field experiment show that interventions that provide similar information using a more personal interaction (face-to-face or video) can increase attention.

II. Setting

We focus on two Israeli campaigns. In 2013, the Israeli retirement savings regulator, the Capital Markets, Insurance, and Savings Department (CMISD), launched a fintech product named "Money Mountain" that collects information from all retirement savings institutions, and provides free access to the data via one website. The website dramatically lowered search costs for finding inactive savings accounts. A year after the Money Mountain website was launched, the CMISD launched a second campaign utilizing the consolidated retirement savings information and focused on closing small inactive accounts in provident funds (a type of retirement savings vehicle) by introducing a tax exemption for withdrawals from small inactive accounts. The intention was to protect account holders against paying new minimum management fees (at least 2 USD per month) that would exhaust their savings over time. With these fees, an inactive account of 300 USD (the median account size found in our data) with a 6% annual return rate would fall to a zero balance in approximately twelve years. Similar incentives to close inactive retirement accounts exist in other countries.

In Israel, employers have been legally obligated to deposit money into retirement savings accounts for their workers since 2008, and unions' salary agreements obligated some employers to deposit savings even before the law. Employers often decide on many aspects of these plans, including the retirement plan provider. However, without automatic portability and continuity of savings after a

change of workplace, a new account might be opened in a different savings vehicle or with a different provider, when an employee has more than one job at a time or starts a new job. Therefore, a large percentage of workers who change jobs may have several inactive accounts. Since people with low socioeconomic status are more likely to change jobs frequently, these campaigns may deliver large benefits to them. It is important to note that both campaigns were national and widely publicized, and the second included personal letters from provident fund providers to savers. The campaigns were expected to have a high impact on observation costs and on the salience of the issue (Gabaix 2019, Golman et al. 2017). Hence, if we assume that no frictions exist, the optimal and rational action for each individual with a work history in Israel is clear: individuals should have visited the website and searched for inactive accounts. For many, it may have been optimal to close the accounts and either withdraw the funds or transfer the savings to a different account. Failing to do so would cost them money, because of the minimum fees.

The campaigns used emerging technological and digital tools. These innovations have the potential to promote direct interaction and deal with the limited attention problem, but they may entail costs for some people, particularly for those with low financial and digital literacy (Ben-David and Sade 2019, Carlin et al. 2017, Karlan et.al 2016, and Benartzi and Lehrer 2015).

III. Data and Results

To investigate the outcomes of the Money Mountain and tax exemption campaigns, we use two data sets. The first data set is proprietary data obtained from a provident fund provider (Anonymous Firm 2017). The data consists of individuals' actual actions and includes information on the number of tax exempt accounts closed, out of over 12,000 eligible accounts (description of the variables in Online Appendix A). The second data set we use to investigate both campaigns is designed to be a nationally geographically and demographically representative Internet survey of

504 individuals conducted after the campaigns ended (Geocartography Knowledge Group 2015). This data provides information about individuals' declared actions and their awareness of the campaigns (description of the variables in Online Appendix A). As provident fund data and survey data each have their own shortcomings, we use both sources to achieve a richer evaluation of the attention to inactive retirement savings accounts following the campaigns. Using the two data sets, we can investigate observation costs, the salience of the information (awareness) following the campaigns, differences between different populations' costs and actual action taken.

First, we estimate the percentage of inactive accounts that were closed because of the campaigns. Our proprietary and survey data indicate a closing rate of 16 % of accounts, which is consistent with the information the regulator provided. This suggests that our samples are representative of the population.[2] Proprietary data shows that individuals who closed inactive retirement savings accounts following the tax exemption campaign were older and came from localities with a higher socioeconomic index (Online Appendix B). Account owners over the age of 60 have a closing rate of 23% and account owners under the age of 35 have a closing rate of 15%. The closing rate for account owners from localities with a socioeconomic index above the median is 18%, versus 13% for account owners from localities with a low index, differences statistically significant.

Our conjecture based on the data is that while the campaigns reduced information search costs, other costs remained. We used the survey data to investigate populations that faced higher costs and hence gave less attention to inactive retirement accounts following the campaigns. Using the survey data, we can differentiate between observation costs that may affect salience and awareness of the campaigns, and other frictions that may affect whether an individual will close an inactive

[2] Provident fund account holders come from localities with a slightly higher socioeconomic index than the country average, but the general closing rate is in line with the country average reported by the regulator. The survey is an Internet survey and like all Internet surveys, it represents only the technologically skilled population and underrepresents certain parts of the population.

account. We know from previous research that financial literacy (both objective knowledge and subjective confidence) can affect financial behavior (Bucher-Koenen at al. 2021, Shefrin 2021, Lusardi and Mitchell 2017, Lusardi and Mitchell 2014).

The survey data shows that people who lacked objective financial literacy (measure of actual knowledge) or subjective financial literacy (confidence in one's knowledge of retirement savings), are more likely to be young, female and of low socioeconomic status, and had lower attention to the campaigns and to inactive retirement savings accounts. These individuals were less likely to be aware of both campaigns, less likely to have visited the Money Mountain website, and had less intention to close inactive retirement savings accounts following the campaigns (regression analysis is provided in Online Appendix C). Additionally, we provide evidence that individuals' subjective confidence in having the relevant knowledge, specifically in the case of retirement savings, is more important than their objective knowledge of general financial concepts for lowering costs in this context. The subjective financial literacy dummy was statistically significant in all regressions (coefficients between 0.9-1.5),[3] and particularly for visiting the Money Mountain website and contacting a retirement provider with the intention of closing an account following the campaign (we look at attention and not accounts closed to mitigate the effect of additional transaction costs). The objective financial literacy dummy is only robustly statistically significant for being aware of the regulatory campaigns (coefficients between 0.2-0.3) and not for actions taken following the campaigns. This may indicate that the measure of subjective confidence captures both actual costs and expected subjective costs. To summarize the main survey results, our simulation (Table I) indicates that among individuals with high financial literacy (both

[3] As outcomes are from logit regressions, interpretation of coefficients is not immediate. We discuss this further in the paragraph.

objective and subjective) and high socioeconomic attributes, over 81% were aware of the campaigns, 93% visited the Money Mountain website and 33% went on to contact the fund provider with the intention of closing an inactive account. These rates drop to less than 33%, 42%, and 17% respectively for individuals with low financial literacy and low socioeconomic status. With respect to reverse causality, it is unlikely that the campaigns significantly increased users' objective financial literacy, because they did not provide financial information relevant to financial literacy and how it is measured. Furthermore, being aware of one specific financial regulation or taking one action following the campaigns is not likely to change the individuals' overall self-perceived financial literacy about long-term savings. We conducted several robustness tests to support each of our findings, including several estimation methods and a matching exercise (detailed in Online Appendix D). Our results hold.

The findings from both sources of data that both campaigns had limited success, led us to ask whether there might be other approaches, besides a media campaign, that could be more effective in overcoming limited attention, especially for populations with higher actual or perceived observation and transaction costs. We conducted a field experiment that investigated the effectiveness of different communication methods on the awareness and actions of an underprivileged population in our sample: Ultra-Orthodox Jewish women with low objective and subjective financial literacy (Haran Rosen and Sade 2017). The women were recruited from a class at a college for Ultra-Orthodox Jewish women. Ultra-Orthodox Jewish women tend to marry young and undertake paid work to support their husbands, who commit to full time religious study. For our experiment, we used the launch of the "Money Mountain 2" campaign in 2017. Like the original Money Mountain campaign, Money Mountain 2 was launched to help the population find

inactive accounts and had the same website as the original Money Mountain, but it extended this service from the retirement savings accounts to other types of bank accounts.

In the field experiment, the interventions we tested included personal and non-personal digital and non-digital interventions (Laudenbach et al. 2018): (1) no intervention (for the control group), (2) an e-mail explanation of the financial campaign, (3) an e-mail explanation together with a video explanation featuring a professional actor, (4) a face-to-face explanation of the financial regulation given by an employee of the Bank of Israel (the organization in charge of banking regulation), and (5) an e-mail explanation given to part of the control group after they had filled out a baseline survey. This last intervention enabled us to isolate the effect of an e-mail on a group that had had an earlier encounter with a Bank of Israel employee (who handed out a baseline survey). We ran a survey on each group following the interventions to investigate their effectiveness.

We find that the interventions that include a more personal interaction (including an e-mail with an accompanying video presentation), increased the awareness of the campaign by more than 100% relative to the control group. These interventions were also more successful in raising the percentage of subjects visiting the website (from 14% in the control group, to between 16% and 28% in the treatment groups). Our conjecture is that a more personal interaction helps lower observation costs or perceived transaction costs.

IV. Conclusions and Implications

In this paper we research the effect of financial campaigns and a fintech advancement on inattention to inactive retirement savings accounts. We document that after the campaigns, inactive retirement accounts still received limited attention. Moreover, this is more pronounced for individuals with low socioeconomic status and low financial literacy.

While the paper focuses on a policy action in Israel, the issues of inactive retirement savings accounts and fintech innovations are of global interest. As time has passed since personal retirement accounts were introduced, DC pension systems have become more prevalent around the globe, and people change jobs more often, so small, inactive retirement accounts are likely to increase in number and to amount to larger sums of unclaimed money. Our field experiment indicates that more personal (and detailed) digital interventions do seem to reduce observation costs and contribute to improving the attention of individuals with low socioeconomic status – and specifically those with low subjective financial literacy. Following the COVID-19 pandemic, online education and lectures have been made much more accessible. Policy makers may try to use these innovations to reach the less attentive population and provide individuals with timely and personal financial information more easily. We leave for further research the possibility of using digital tools to promote financial awareness among different populations.

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Table I – Probability of being affected by the financial regulation for specific populations						
			Awareness of the Money Mountain campaign	**Awareness of the tax exemption campaign**	**Visited the Money Mountain website**	**Contact with the intention of closing inactive account**
High objective and subjective financial literacy	**Male**	**High socioeconomic status**	86%	92%	95%	47%
		Low socioeconomic status	75%	72%	83%	29%
	Female	**High socioeconomic status**	81%	89%	93%	33%
		Low socioeconomic status	68%	65%	77%	18%
Low objective and subjective financial literacy	**Male**	**High socioeconomic status**	51%	48%	74%	30%
		Low socioeconomic status	33%	17%	42%	17%
	Female	**High socioeconomic status**	42%	40%	66%	19%
		Low socioeconomic status	26%	13%	34%	10%

Notes: The table summarizes outcomes from logit models in Online Appendix C on individuals who are married, non-immigrant, secular, and employed. The table displays outcomes for women and men who have high (3) or low (0) objective financial literacy index and high or low subjective financial literacy (confident in their retirement knowledge), respectively. Outcomes are displayed for individuals with high socioeconomic attributes: aged 55, with an academic education, and above-average income, and low socio-economic attributes: aged 35, with a high school degree or lower, and below-average income. Data obtained from Geocartography Knowledge Group (2015) main survey sample.