

Conference Paper

Contemporary Aspects of Financial – Banking Responsibility

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Abstract

We all as individuals, have responsibility for any decisions, in terms of time, value and risk. In time, the system in which we are evolving requires different behaviors that are in alignment with our interests, as individuals, as organizations or as institutions. The paper brings into attention the concept of financial responsibility manifested in financial -- banking environment, as a concept and as a species of financial education (or literacy). The main aim of this article is to evaluate the awareness, the manifestation and the importance of financial responsibility in Romania. The primary results reveal the fact that financial responsibility can improve the positive effects on individual's welfare, and also the good impact that financial system has on market economy. Moreover, here it is also evaluate the impact of financial education on the financial responsibility manifestation, as well as the theoretical interdependence ratio between those two terms -- financial responsibility and financial education/literacy.

Keywords: financial -- banking responsibility, moral hazard, financial education.

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1. Introduction

In those contemporary times, societies face new challenges driven by evolution process like: social evolution, real economy evolution as well as financial -- banking environment evolution. In the top of those, the evolution of individuals, as human beings with quite different characteristics of wants and needs, and lifestyle. Moreover, the same attention it requires the evolution of environment, climatic changes, and use of fossil fuels, and so on. That is why more and more academics are interest in eco-economy and bio-economy, even eco-bio-economy concepts.[1]

In this context, we consider that attention should be oriented on individuals' financial behavior that has impact on those real facts that we mentioned above. Therefore, in this paper we bring into discussion one new possible concept that is financial responsibility. We thing that financial responsibility could be an important factor for the soundness of financial system first, and for the real economy second.

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At the beginning of the research process we found that financial responsibility is associated, in many cases, with damages generated by inappropriate management of personal finance, by motor vehicles accidents, damages generated by pollution events and also with financial duty of students for university educational services or with financial duty of patients related with health care services providers. [2], [3], [4], [5], [6], [7], [8], [9], [10]. Considering this, paper's purpose is to define a new concept of financial responsibility, specifically for financial system that can have an impact (positive or negative) on well being of individuals and on real economy.

2. Methodology and Data

As we mentioned earlier, our main purpose of this study is to evaluate the potential manifestation of financial responsibility among individuals and entities, in Romania. For that we express the meaning of the concept of "financial responsibility" with its main components based on critical thinking research method. After that we apply the concept of "financial responsibility" on financial data, specific for Romania, using statistical and other research methods. The main body of Romania's financial data is provided by National Bank of Romania and Financial Supervisory Authority (ASF) reports and statistic platform. For data analysis, we focus mostly on individual financial responsibility behavior.

3. Financial Responsibility Concept - The Model

The general meaning of responsibility (R) refers to a duty or an obligation to do something. More exactly, responsibility means a duty to satisfactorily realize a task that one must fulfill, and which has a consequent penalty for failure [11]. According with this definition, the concept of responsibility has two important attributes like:

1. An action (A): to manifest a responsibility you have to take actions, to do something for somebody or to make something that, in future, has impact on something or somebody. And, actions should be like commitments,
2. An moral duty (obligation) (M_D): that reflect the compulsory character of responsibility act; It is a moral duty for someone to take specific action on himself's and others's behalf. In our opinion, the character of obligation/duty is not strictly. Because it is possible that the actions which must be done, in order to be responsible, not be realized. In that case, it is possible to appear the penalty. To be responsible

reflect also the fact that it is moral (a matter of honor or duty) to take that action along with the obligation of it.

3. A habit (H): this should represent the milestone of the concept responsibility, because taking an activity must be based on conscious repetition of that action that someone is responsible one.
4. A penalty for failure (P): the application of a possible monetary or non-monetary penalization for not being responsibility manifested.

Using simple logical relation, we can express responsibility like:

$$R = f(A, M_D, H) \tag{1}$$

Additionally, if responsibility is not assumed that mean we manifest irresponsibility, or, logically, non-responsibility:

$$\text{Non-R} = f(\text{non-A}, P) \tag{2}$$

We need to think that it is not enough to pay the penalization for failure and treat the problem in this way. This could be a short term thinking. We have to have a long term approach and to assess the possible consequences for non-responsibility attitude. Those consequences could be material or non-material, and could affect sustainability (S) development of different systems. We can use this semnification of the term of responsibility in every aspects of humanity life: social, economic, political, health care, education, environment, and so on.

As a result, responsibility could be studied as a manifestation of disciplined (repetitive) actions, approached as moral duty character along with sustainability of those entities involved.

$$R = f(A, M_D, H, S) \tag{3}$$

We made those previous conceptual remarks, in order to express more properly how is manifested responsibility into financial system. Thus, we consider that the concept "financial responsibility" (FR) to be associated with:

1. The fact that specific responsibilities are manifested in interaction with financial system (FS).
2. The fact that non-responsibility generate financial or non-financial penalties ($P_{f/non-f}$) for not taking assumed actions,

$$FR = f(R, FS) \quad (4)$$

and

$$\text{non-FR} = f(\text{non-A}, P_{f/\text{non-f}}) \quad (5)$$

Nowadays, we face societies more and more complex and interdependent. Thus, in order to financial responsibility to have positive effects at aggregate level (at national or more), individual financial responsibility must occur. So, aggregate financial responsibility (FR_a) becomes a natural consequence of each individual financial responsibility manifested. For that we consider:

$$FR_a = \sum FR_i \quad (6)$$

At some point we thought that the concept financial responsibility could be synonym with the concept of moral hazard. Related with that, we argue that "financial responsibility" concept is different from "moral hazard" concept. Usually, "moral hazard" is close related with information available about financial behavior of potential borrowers. Moral hazard is generated by asymmetric information and adverse selection, creating default risk in financial markets [12], For present paper we sustain that "financial responsibility" concept is more broadly, and cover also the moral hazard concept. Another difference among those two concept is that moral hazard generates financial loses, but not accomplish financial responsibility must generate penalties. And here could be an important question: who establish the level and content of penalties; and also this concept must be supported by a specific law or regulation? In the case of financial system, responsibility is already supported by institutional regulation. Is that enough? Should we extend the existence amount of regulation, or should we change some parts of regulation's content? At this level of research is quite difficult to answer at those problems.

Considering all these details and using logical assumptions mentioned above, we consider that financial responsibility can be defined as the repetitive actions of using money in order to create sustainable added value for individuals or economy and society. If financial responsibility will not occur, we face irresponsibility (or non-responsibility) that generates financial or non-financial penalties.

4. Financial Responsibility Facts

All we know that financial system is a complex structure of infrastructures, institutions, professionals, and specific products and services (mostly financial instruments). Considering time as the main driver of financial system's evolution, the same factor generates the need to study the behavior of financial environment's components.

That is why we can look financial system as a living system, where economic subject's behavior influences the economic path. We as individuals are considered economic subjects that have interests, wants and needs, wills, motivations and intentions, and we always act in financial environment guided by those interests [13].

Along with these, economic subjects (as individuals or as representatives of different entities) should be aware of financial responsibility. Every day we take at least two decisions: (1) decision to invest, and; (2) decision to finance. Therefore, according to those two types of decisions we have to take into consideration financial responsibility potential be realised in: (1) banking and financial non-banking field; (2) private -- individual or corporation, and public level;

4.1. Financial responsibility in banking

Even though banking industry has changed dramatically in the last decades, due to financial globalization and due to financial regulation, and transformed traditional banking in financial holdings (that offer different types of financial services), in emerging economies like Romania, traditional banking has the main importance for investing and for finance. The share of financial system assets in GDP reached the level of 69.2% in 2018. Among those we notice the dominance of banking sector assets (75.5% of financial system assets), even though Romania continues to hold the smallest share of total bank assets in GDP (49.3% at mid 2018) [14].

To assess potential financial responsibility at individual level we have structure the analysis in two main parts: (1) savings - investments; (2) loans -- financing.

4.2. Exploring individual financial responsibility for savings - investments

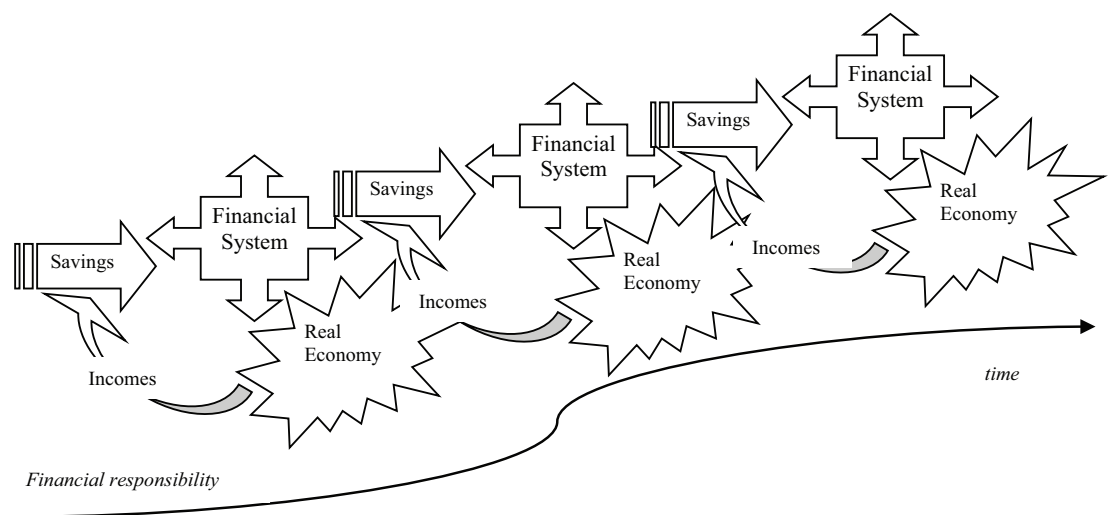
Theoretically, in economy exists a basic principle: the majority of investments are based or should be based on savings. Those savings could be present savings or future savings. Nowadays an individual can have the opportunity to make an investment today

with no present savings, but with future savings. For instance, one particular investment can be realized based on loans today, but sustained by future savings (usually potentially constant future wages) used to pay back that present loans. In contemporary societies, most individuals use financial-banking sector to finance their investments (real estate, education, cars, long-life products, and even daily life products) through loans, ignoring or misunderstanding the risks they are exposed to. Using loans for today's comfort, individuals use mostly future savings. And future is uncertainty. In fact, that is the main problem of not being aware about importance of the own financial education. It is related with behaviors, with the reasons (motives) for making investments, savings, or loans.

According to some evidence, it seems that the likelihood of savings is explained by reasons established for savings (education, retirement, emergencies - precautionary) and savings horizon, using the prospect theory which shows that both consumption and saving decisions are based more on a reference point and less on lifetime income [15]. In some cases saving behavior for precautionary situations is close affected by some relatives' life experiences like unemployment [16]. Or, having an additional brother, in urban China, could reduce an individual's household saving rate by at least 5 percentage points [17]. Saving behaviour traces from social commitment of relatives in some individuals' life, more often parents. Parental teaching contributed at development of financial education that can improve saving process [18]. Also, it seems that commodity price uncertainty affects saving behavior and welfare in a dynamic model. Based on US data, the results reveal that price uncertainty induces precautionary saving and reduces welfare especially for risk aversion individuals. European countries' profile with more volatile prices presents more pronounced effects [19]. Another research results shows that, in a High-Tech society, higher-income individuals prefer saving time compared with low-income individuals which prefer more saving money [20]. Moreover, income inequality mainly has a negative impact on growth but has a positive impact on saving (i.e. explaining high saving in China) [21]. There are findings that shows that financial system development has direct and positive impact on private savings (i.e. in South Asia) [22]. Considering business cycles a cause for saving attitude, there are evidence that saving ratio is countercyclical for households [23].

Therefore, we consider that building individual savings reflect a financial responsibility problem. We have to acknowledge the fact that it is important to take actions for building savings (s,) during the whole life, because this have impact not only on individuals but also on financial system and real economy (E) as well (Figure 1). Developing the habits to make savings reflect the concrete actions of moral duty for future individual wellbeing (for future education, developing professional life, family care, and retirement), and also

reflect the own responsibility, not other's. For instance, saving now for retirement reflect the own financial responsibility not other's. Generate individual long-term savings also contribute, in time, to developing financial system (with specific institutions, instruments and markets) and real economy (with the main parts: GDP, wages-incomes, unemployment, imports-exports, interest rates -- investments, government expenditures, and so one). In our opinion, financial responsibility in savings represents the fuel of development, in time (Figure 1).



Source: Autor's own work

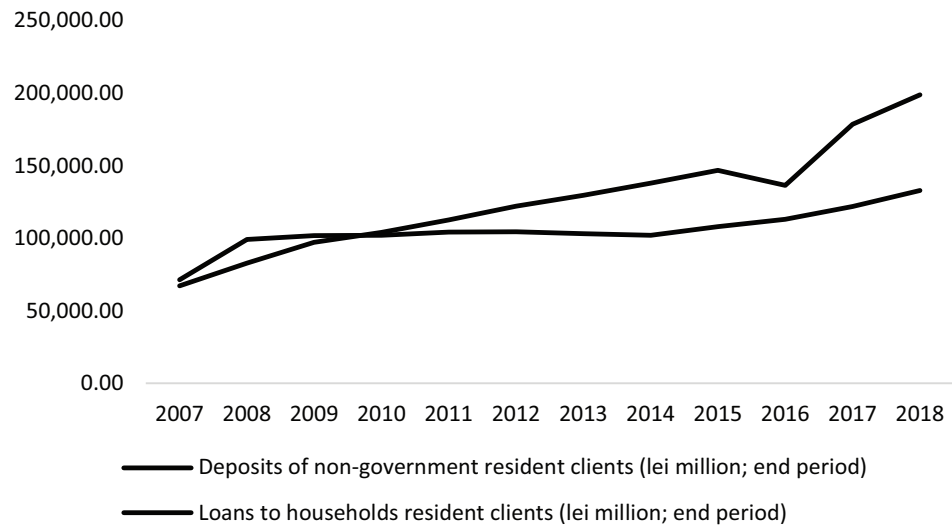
Figure 1: Influence of savings on financial system and real economy Source: Autor's own work.

Financial system represents the market where financial responsibility can be manifested. Individuals can use different financial assets (instruments) to accomplish the moral duty for themselves and/or others in that concern financial responsibility. Therefore, we think that is a sustainable moral duty to take actions into financial system, to become financially integrated in real economy. Based on financial education, natural persons could use from the simplest banking products and services to sophisticated financial products and services.

4.3. Data for Romania

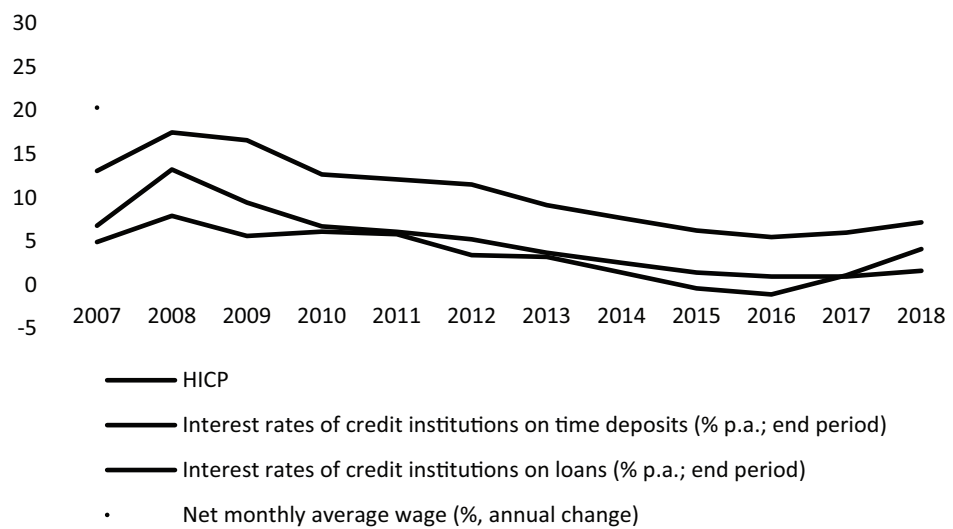
Romania has a developing financial markets, with banking sector dominating. In this environment, Romania's residents can acquire traditional banking products for savings like: overnight deposits, saving accounts and time deposits. From 2010, Romania's resident customers become net creditor for domestic banking system with 198,781.7 million lei in deposits (2018, end of period). (Chart 1). In this total amount, overnight deposits represents 42.86% (in which 59.33% denominated in lei, 35.35% in euro

currency and 5.32% in other currencies) and 57.13% time deposits (with maturity of up to and including one year deposits and with maturity longer than one year deposits). Here we notice that only 17.69% among total deposits represents deposits with maturity longer than one year [24].



Source: NBR's data, <https://www.bnro.ro/Baza-de-date-interactiva-604.aspx>

Figure 2: Household's Deposits and Loans for Romania 2007-2018 (Source: NBR's data, <https://www.bnro.ro/Baza-de-date-interactiva-604.aspx>).



SOURCE: NBR'S DATA, [HTTPS://WWW.BNRO.RO/BAZA-DE-DATE-INTERACTIVA-604.ASPX](https://www.bnro.ro/BAZA-DE-DATE-INTERACTIVA-604.ASPX)

Figure 3: Inflation, Interest Rates and Wages for Romania 2007-2018 (Source: NBR's data, <https://www.bnro.ro/Baza-de-date-interactiva-604.aspx>).

Thus, intuitively, we can comment that Romanian natural persons are oriented more on short time saving, in order to have opportunity to use money for current consumption or investments. For our paper, we consider that to be financial responsible, Romanians should be oriented more on future spending, based on time deposits with maturity longer than one year. We also assume that the main reasons for which Romanians are oriented more on overnight deposits and less on time deposits with maturity longer than one year might be:

- The level of interest rate played by credit institutions (around 1.6% p.a -- 2018, end of period) (Table 1 and Chart 2), which is affected by 10% interest tax and also by other banking fees. Thus the low return of banking deposits might be unattractive for customers.
- The level of financial education among domestic citizens. Romania occupies last place among EU countries and 123th place among 143 world countries in that concern financial education level. Only 60% of Romanian adults are banked compared with Austria's and German's adults that are banked around 99%, and compared with an EU average by 90%. (Romanian Bank Association, 2019),
- The cultural legacy of households, considering the household's customs in that concerns savings, investments, and wealth.

Analyzing data reported by National Bank of Romania we notice at least two contrasts: (1) total amount of household's savings is constantly raising (on annual average with roughly 14.23% except the 2016 were the total amount of deposits decreased with 7.03%) even though the banks deposits' interest rates decreased; (2) The annual changing of wages do not necessarily affect the level of bank deposits (Chart 3). In this case we assume that because the low level of financial education in Romania, domestic individuals might prefer other destination to save or invest money in non-financial environment (i.e. real estate, land, businesses) or in small portion, they prefer to invest in exchange market, or insurance-annuity-retirement plans.

Thus we think that, considering financial responsibility concept's conditions, here are:

1. Actions (A) because individuals (Romanians) keep saving;
2. Moral duty (M_D) and habit (H) are hard to evaluate on such short period of time data, but because the total amount of deposits is increasing, we can assume that Romanians has a certain level of awareness about the importance and necessity to save. Referring to this, we think that it is necessary to develop an additional research about a possible correlation the level of education and the habit of

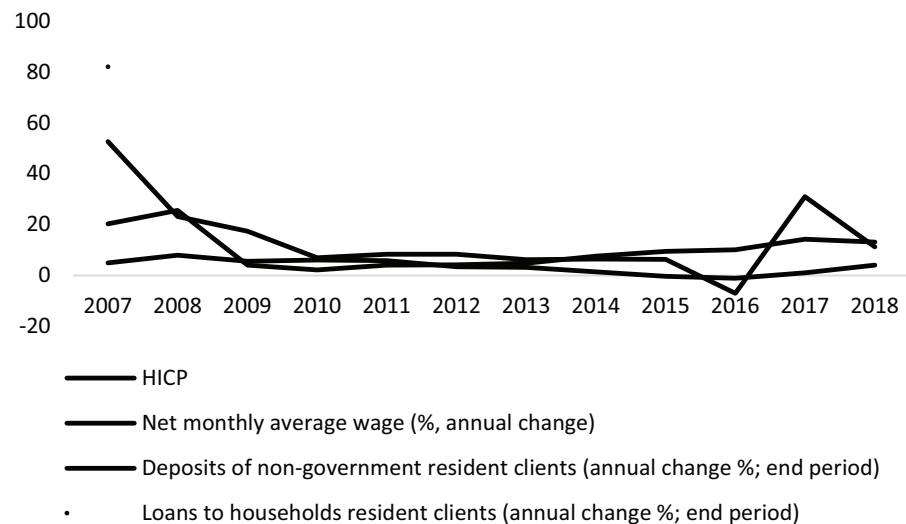
TABLE 1: Romania's annual changing indicators: inflation, average wages and household's deposits and loans after EU accession, 2007-2018.

Year	HICP	Net monthly average wage	Household's deposits	Household's loans	Credit Institutions' interest on time deposits	Credit Institutions' interest on loans
Annual change (%)					(% p.a.; end period)	
2007	4.9	20.3	52.56	82.08	6.78	13.05
2008	7.9	25.6	23.12	38.73	13.22	17.47
2009	5.6	4	17.41	2.74	9.42	16.58
2010	6.1	2.2	6.99	0.18	6.70	12.66
2011	5.8	4.1	8.3	2.11	6.07	12.08
2012	3.4	4.2	8.4	0.20	5.22	11.5
2013	3.2	4.8	6.14	-1.17	3.67	9.14
2014	1.4	7.6	6.39	-1.09	2.53	7.65
2015	-0.4	9.5	6.35	5.71	1.41	6.22
2016	-1.1	10.1	-7.03	4.71	0.95	5.47
2017	1.1	14.3	30.92	7.79	0.94	5.98
2018	4.1	13.08	11.26	9.17	1.61	7.16

Source: author calculations based on NBR's data, Monthly Bulletins 2007-2019

saving, and also a possible correlation between unbanked saving behavior and banked saving behavior. Considering that only 60% of Romanians are banked, it is necessary to find out how many of those has a saving account, that is frequently fed with money (from different source of income: wages, rents, fees, dividends, interest, and so on). Moreover, it is interesting to evaluate what kind of motivation drives the fuel for saving accounts.

3. Sustainable (S): here we think that has the lowest level into financial responsibility context. That is because we always analyze sustainability on long term. Thus, we mention above that only near to 17% of household's bank deposits are time accounts with maturity longer than one year. Additionally we also consider that sustainability is stimulated by habits to save. Generally, we suppose that if individuals has long term goals for saving, they will save constantly (the same amount of money, or use a certain formula like when wages rise, also saving rise, sometimes with the same rate, or use another suitable saving money strategy) [25], [26].
4. Financial Penalty (P_f) for not being financial responsible in saving might be the sacrificed wealth for future, and that mean a certain higher level of individual standard living.



SOURCE: NBR'S DATA, [HTTPS://WWW.BNRO.RO/BAZA-DE-DATE-INTERACTIVA-604.ASPX](https://www.bnro.ro/baza-de-date-interactiva-604.aspx)

Figure 4: Inflation, Wages, Deposits and Loans for Romania 2007-2018 (Source: NBR's data, <https://www.bnro.ro/Baza-de-date-interactiva-604.aspx>).

As we mention before, Romanian's financial system is dominated by banking assets with 75.5% (2018Q3) followed at long distance with assets below 10% other principal financial assets types of private pension funds (7.7%), investment funds (6.8%), non-bank financial institutions (6.1%), and insurance corporations (3.9%). Among those pension fund assets faced the highest growth with around 22% (sept.2018/sept.2017) [14].

In Romania retirement income can be provided from 3 different official sources, regulated by the state and by the Financial Supervisory Authority (ASF). It is about three different pillars: I, II, III:

- Pillar 1 represents the compulsory employee contribution for the future public (state) retirement income; those attracted financial sources are managed entirely by the state. In fact Pilar I represents Romania's public pension system
- Pillar II represents a certain percentage from social insurance contribution (5%, 2015) that is transferred automatically by employer to a private pension fund to be managed. Pillar II represents Romania's compulsory private pension system. [27],
- Pillar III represents an additional account for future retirement income, and it is optional for Romanian employees. They can choose a Private Pension Fund that has this service in their offer and, after that, the employer transfer the specific

amount of money (from salaries) for private pension account. In the same time, up to 400 euro/year individual contribution to Pillar III is tax free [28].

Official data about the size of Private Pension Funds Market in Romania confirm the fact that is a developing market. (Table 2.). According to EUROSTAT, Romania's population were 19.64 million persons in 2017. In January 2019 NBR reported 4,960.3 thousand persons employed in Romania's economy, with an official unemployment rate by 3.3% in the same period [24].

TABLE 2: Romania's Private Pension Funds Indicators, March 2019.

Indicators	Pillar II	Pillar III
Private Pension Funds	7	10
Participants (thousand persons)	7,308.93	479.7
Total Assets (million lei)	51,081.84	2,128.42
Weighted average rate of return for mandatory private pension funds for last 24 months (p.a.%)	2.8758	1.5990

Source: ASF's data, Statistics - 2019

Exploring ASF's data we found that 7,308.930 thousand persons were Pillar II participants in March 2019 compared with 4,156.32 thousand persons reported in May 2008. At Pillar III only 479.7 thousand persons were enrolled in March 2019 compared with 87.954 thousand persons in May 2008. Taking into account demographic evolution, diaspora issue, and uncertainty of Public Pension Fund's sustainability, we consider that having a private retirement account reflect a positive manifestation of financial responsibility. In this case, financial responsibility for private retirement income has all conditions respected:

1. Action (A) -- buying a private pension fund contract,
2. Moral duty (M_D) -- by planning financial future, for better wellbeing and for not depending only on the state public retirement income or on relatives future incomes.
3. Habit (H) -- by paying constantly the same amount of money for future spending, for an important life goal, during several decades.
4. Sustainability (S) -- by thinking an individual financial strategy on long term.
5. If individual's haven't a private pension fund account could possibly generate financial penalty, because actual data reflect the fact that, after some decades, there will be no efficient public pension system in Romania, and individuals must sustain financial themselves in retirement period.

In that concern Romania, we consider that if financial education will be higher, thus more and more Romanians will be aware about importance of financial responsibility for retirement period.

Besides those two way of manifested financial responsibility as individual level -- having banking savings and private retirement plans -- financial system can be explored in other fields too. We think here at compound saving accounts offered by different financial institutions, or transactional account on Exchange, and so on. But to use more complex financial products and services must be accompanied by constantly improved financial education level (mostly by self-education using technology).

5. Conclusion

This paper defines the concept of financial responsibility as individual characteristic leading him to save for future wellbeing. For that we present the main characteristics of financial responsibility in financial environment. We also emphasize the relevance of financial responsibility in saving case (saving in banking system or saving in private pension funds). In parallel we use Romania's financial data to assess the potential manifestation on financial responsibility. We found that Romanian seem to have a certain level of financial responsibility behavior both in banking saving and in private retirement plans. But, considering the low level of financial education in Romania, we also consider that the level of financial responsibility is low.

There is a room for analyzing in greater detail the financial responsibility concept. We think that can be relevant if this concept can be extend in the case of using financial debt instrument (such as loans -- those on short, medium and long term), or in the case of using public finances by Government. Can individuals educate financial responsibility habits through loans? Or, is Government financial responsible, for actual and future generations? Moreover, the research can be developed on P2P lending field, too, or in the case of businesses.

To sum up, we are aware about the fact that the presented model can be refined and can be extend in different parts of financial system, and should be applied on more complete data, for and/or many other countries/regions.

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