ANALYSIS

On Financial Pyramids

In order to raise awareness among financial and non-financial institutions operating in the Republic of Armenia, as well as among the general public, an analysis has been conducted, based on the local and international experience with the aim of describing the nature of financial pyramids, their types, potential negative consequences, regulatory mechanisms, as well as the role of financial and non-financial institutions in combating such schemes.

1. The General Description and Types of Financial Pyramids

Nowadays, the extensive development of telecommunication and information technologies has resulted in a wider use of financial pyramids, which have the potential to pull in large masses of populations. Particularly, the availability of internet advertisement and on-line payment methods through the modern communication means, as well as the existence of a mass audience (market) have given a new impetus for the realization of these rather long-track schemes.

As the name implies, financial pyramids have a hierarchic structure initiated by certain people, who try to pull in as many investors as possible in expectation of generating gains. At each level of the scheme, new investors make payments to those at higher levels and receive payments from those at lower levels of the pyramid, thus actuating a specific mechanism for the redistribution of funds. To enable a proper functioning of the scheme, it is necessary that the number of newly joined members increases in a geometrical progression, which means that every investor needs to recruit a certain number of new members.

From the investors' point of view, a specific characteristic of financial pyramids is that, in the early stages everything goes on as expected and promised. This is to say, initially, the members gain certain income, thus becoming motivated to involve new members and act as a good vivid advertisement for the pyramid. Thereafter, the scheme expands and increases in a snowball effect, and at a certain point reaches the stage when it is practically impossible to pull in new members, whereas the members already on board and the payments made by them have reached a quite significant amount. Hence, by taking advantage of both the gullibility of victims and the attractiveness of the idea to earn a lot of money within a short period of time, the individuals on the top of the pyramid manage to earn large profits, while those at lower levels are not able to make any profit due to the inevitable collapse of the scheme.

The pyramid works in the following way: the initiator convinces a person to join the scheme by investing, for example, 100 Armenian drams[1]. This amount goes to the initiator, while the newly joined member. Pursuing to recoup his/her investment and to make some profit, he/ she has to involve new members into the scheme with an entrance fee amounting 100 Armenian drams for each additional individual. If the newly joined member is

[1] This is a simplified theoretical example.

successful in recruiting 10 new members, he/she may take, for example, 500 Armenian drams against his/her initial investment of 100 Armenian drams, while the other 500 Armenian drams would go to the organizer of the scheme.

Each of the 10 newly joined members should recruit another 10 new members and etc. The process evolves up to a point when, the pyramid, which is increasing in a geometrical progression, for objective and subjective reasons (such as the limited number of a population, loss of confidence in the scheme and etc.), is not able to involve new participants. The number of participants in this scheme at its 10^{th} level (10^{10}) exceeds the total number of world population by 3 billion (10 billion – 7 billion).

Hence, with this example, assuming that the whole population of the world would join the scheme, the members at the 9^{th} level are not ~~more~~ able to recruit 10 new members. This means that the minority comprising 111.1 million persons would make a 500% profit over their investment; the absolute majority comprising 1 billion persons would lose their initial investment of 100 Armenian drams, while the organizer would gain 55.6 billion Armenian drams without having invested even a single penny[2].

Furthermore, the majority of financial pyramids imply certain profit margin in addition to the repayment of the initial investment. At higher levels of the pyramid, everything goes on as promised~~,~~ and in early stages, when people are able to recoup their initial investment and the large interests associated with it. It is obvious~~-~~that these interests are funded from the investments made by the newer members. Given the fact that in the early stages, the majority of members would not request their investment back, the distribution of funds between the organizer and the ordinary members does not significantly differ from the one described in the above ~~simplified~~ example.

Quite often, financial pyramids operate under a certain~~ly~~ set of modified rules, which basically aim to maximize the profits made by those at the higher levels of the scheme, since they are the ones, who provide momentum and attractiveness of the pyramid, with their profits being a vivid advertisement for all of the others. This may be realized by several methods[3]:

- The membership fee (initial investment) increases over time or along with the addition of new levels in the scheme. For example, the funds invested in the widely-known scheme “MMM-2011” were denominated in the conditional unit “мавро”, which had an “exchange rate” that increased over time. In addition to the objectives articulated above, this also aims at maximizing the profits at the time of collapse of the pyramid.
- Participants of the scheme may make a profit not only upon the immediate recruitment of new members, but also when their recruited members begin to

[2] The calculations are based on the assumption that all members from the 1^{st} to the 9^{th} levels recruit 10 persons exactly, and those at the 10^{th} level do not manage to recruit anyone.
[3] In terms of internal distribution of profits, financial pyramids can be defined through other methods as well; however, this analysis has not reflected on such other methods.

involve new members. For example, this results in a situation when, a member at the 5th level may make bigger profits than the members at the 6th and lower levels.

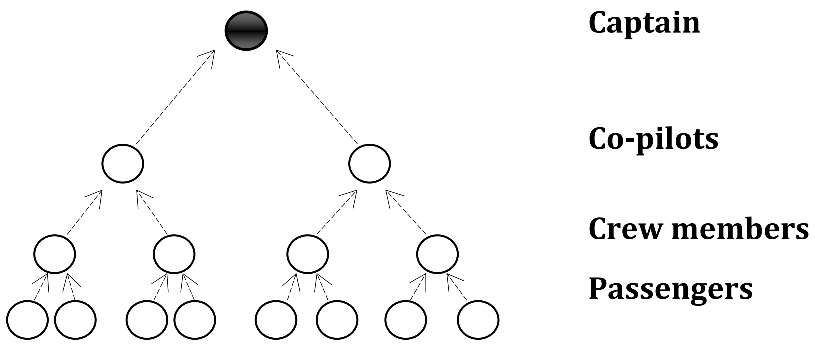
Participating in investment schemes, as well as making investments by their own will, seems to be legal at first glance, however, it is obviously illegal to deceive people into believing in unrealistic expectations about profits that they could potentially make. In particular, the organizer (and perhaps some of the members) has a clear understanding that at a certain point in time, the scheme would stop functioning; however, unlike the organizer, ordinary members do not have the slightest hint as to which level of the pyramid they are positioned at. In essence, pyramid schemes, in essence, are fraud schemes, because the new members are promised large profits and at a certain point in time, those promises becomes, in principle, impossible to achieve due to certain factors which are inevitable to move around. In addition to this obvious deception, any similar initiative, where one party takes money from the other without a contract or other legal bases, most probably comprises the risk of embezzlement through the abuse of confidence of the creditor.

Since financial pyramids are forbidden in many countries, they are often operated in masqueraded ways, some of which are discussed in the below sections of this paper. In spite of a large number of variations, financial pyramids have one important characteristic in common – they promise high yields to the participants based solely on the recruitment of other participants into the scheme, which has nothing to do with creating added value through real economic activities (investments, trade of goods, provision of services and etc.).

Below a brief description of the some of the most widespread financial pyramids is provided:

A) Schemes Using the “Eight Ball” Model

The “eight ball” model is a relatively simple type of financial pyramid~~s~~, which appears to limit the number of participants involved. The hierarchy comprises of 1 captain, 2 co-pilots, 4 crew members and 8 passengers. Every crew member should recruit 2 passengers with each of them obliged to pay, for example 1.000 Armenian drams. The collected sum (8.000 Armenian drams) goes to the captain, who leaves the game[4]. Afterwards, the group then is reorganized or “split” into two. The co-pilots become the captains of the newly formed groups, crew members become co-pilots (2 in each group), the passengers become crew members (4 in each group), and new passengers are recruited (8 in each group).



[4] He may re-enter the game as a passenger.

This scheme, while seeming to be rather limited at the first glance, in case of successful implementation transforms into two schemes, which transform into four schemes and etc. As opposed to other financial pyramids, it is the number of people involved in one scheme that increases by geometrical progression, but in the case of the "eight ball" and similar schemes, it is the number of the schemes themselves (and consequently, the number of involved persons) that increase in a geometrical progression up to a point when they stop splitting and become "lifeless" cells.

The "eight ball" model may be used as a scam in non-face-to-face relationships in the following way: the captain would fill in the levels above the passengers with phony names (in fact solely acting on behalf of them) to take hold of the payouts intended for them as captains. The "eight ball" model and similar schemes are specific in a sense that at a certain point in time, the captain leaves the game ceding his position to other captains, who make a profit eight times the size of their initial investment as opposed to the astronomic gains received by organizers of successful classic pyramids.

B) Financial Pyramids Using the Network Marketing Model

The nature of these kinds of financial pyramids is masqueraded as network marketing, which purports selling of a specific product though the customers. Specifically, the customers become agents in this scheme and have certain gains from recruiting new buyers.

Network or multi-level marketing is a rather widespread business scheme in today's world, which is specifically effective when used in the virtual environment through modern telecommunication technologies. In view of this factor, criminals use the advertised product to conceal the nature of the financial pyramid that is operated by them. Particularly, a new element is added to the classic pyramid scheme – an inadequately high payment for a low or no value product (which comes to substitute the "entrance fee" or "investment" used in classic schemes) – with the buyer becoming an agent and being entitled to recruit new customers. Furthermore, certain material and non-material characteristics are attributed to the product in an attempt to justify the inadequately large payment.

In comparison with classic financial pyramids, the pyramids that involve network marketing elements have certain "advantages" from the organizers' standpoint. Particularly, they:

- Enable the circumvention the legal barrier of "illicit economic activity" usually applied to pyramid schemes insofar as allowing the organizers to present themselves as a company engaged in the trade of goods;
- Appear to be more trustworthy for the potential customers due to the fact that they give the participants the impression of having some guarantee in the form of low quality or low value products.

On the other hand, there are certain characteristics, which might be helpful in discerning network marketing from financial pyramids:

- In financial pyramids, the real value of the sold product is significantly lower from the sales price, and this difference is “compensated” by attributing to it certain non-existent material and non-material characteristics;
- The goods in their proposed form and product features are not available for sale at public service and trading areas;
- In the case of financial pyramids, it is likely that such large quantities of goods will be sold to the new participants (without buy-back options), which cannot be resold within a reasonably short period of time;

Whereas:

- Network marketing involves goods that have a certain trading efficiency and potential for making profit due to their recurring/regular sales to customers;
- Members at any level of a network marketing scheme may make profits through the sale of goods and services, without the need of recruiting new members;
- Members at any level of a network marketing scheme may outperform the member who had once recruited them, without the need of making mandatory hierarchic contributions from their profits to that member.

C) Matrix Schemes

In matrix schemes, a waiting list is formed where the person on top of the list (not necessarily the organizer of the scheme) gets the desired product (outcome) provided that a certain number of new participants join the list. For example, for the person on the first position of the waiting list to receive a computer priced 200.000 Armenian drams, it is necessary that nine more people join the list by means of buying a digital video disc priced at 50.000 Armenian drams. In this case, the first in the waiting list would get the computer and leave the list, while the second in the waiting list would make a step forward and take the first position to wait until nine more people buy the digital video disc. Hence, for the people holding the first 10 positions in the waiting list to get the desired product, it is necessary that another 81 people buy the digital video disc at significantly overstated prices.

The organizer of the scheme, who is the seller of the digital video discs and provider of computers to those in the waiting list in the above example, has large gains without making any investment, since the sum of pay-ins from new participants is always greater than the sum of pay-outs. In the above example, the profit made by the organizer equals to 91*50,000-10*200,000 = 2,250,000 Armenian drams.

Organizers may earn much larger profits if they fill the waiting list with phony names until the turn of the real participants comes. In this regard financial pyramids masquerade as network marketing pyramids; however, there are two differences in terms of their arrangement:

- Getting the desired payout in matrix schemes is more difficult, since every new joiner creates a next level in the waiting list, thus increasing the pyramid only in vertical direction;
- Recruitment of new members by a person in matrix schemes does not provide for addressed and immediate benefits for that person, as the receipt of the payout depends only on his/her position in the waiting list.

D) Ponzi Schemes

These are schemes that are named after the organizer of a similar scheme, Charles Ponzi, who, by promoting the idea of making large profits on price differences of stamps in different countries, involved investors by promising them high yields within several months. Though the project proved to be unsuccessful, Ponzi managed to convince new investors to join it, thus paying back early investors their initial investment plus large interests funded from the contributions of later investors. After having established a reputation of a trustworthy and successful businessman, Ponzi expanded the scheme by the snowball effect resulting in its collapse and huge losses for the investors several years later.

Hence, the criminal in a Ponzi scheme recruits investors by promising high yields deriving allegedly from real investments or business efforts. However, instead of generating real gains, the criminal creates an outward appearance of such gains by funding payouts to the investors from their initial investments from those of the new investors who fall victims of the scheme. Such schemes collapse when the amount of new investments is not enough to meet the current liabilities for early investments.

Ponzi schemes are different from classic financial pyramids in that:

- The organizer of the scheme (in some cases, a small group of devoted persons) is the main actor putting efforts for the recruitment of new members;
- The members pass on funds to the organizer without intermediation, in a non-hierarchic manner;
- The members have no chance to become aware of the pyramid nature of the scheme.

In spite of these differences, Ponzi schemes are considered to be a variation of financial pyramids, since their viability depends on the uninterrupted influx of financial resources from new investors as a means to fund payouts to early investors. In some cases, the funds collected through Ponzi schemes may be partially channeled to real investment projects; however, the clue here is that no real investment project may ever provide for the profitability promised to the investors.

2. The Economic Consequences of Pyramid Schemes

During the last two decades, financial pyramids have found fertile soil in developing countries for their implementation, where the population had never before experienced such similar schemes. For example, by the end of the 1990s investors in Albania had invested a total amounting to 1 billion US dollars in different pyramid schemes, which comprised about 43 percent of the country’s GDP at the time. These schemes, which operated in parallel and collapsed almost simultaneously, involved around a third of the population of Albania. Due to unsound political and financial management, the country found itself on the edge of civil war. As a result, the government fell, the economy descended into chaos and the subsequent rioting took the lives of around 2.000 people.

In Israel, during the 1980s, hundreds of thousands of investors were involved pyramid schemes. In those classic pyramid schemes, the banks offered their own shares for sale promising investors that the price on them will only go up (sometimes by 2% daily). The banks used up all of the depositors' money, their own capital and profits to keep this unhealthy and impossible promise. This specific pyramid scheme - arguably, the longest in history - lasted for 7 years.

On a specific day in 1983, all the banks in Israel became bankrupt. The civil unrest that followed the bankruptcy, forced the government to instigate elaborate compensation programs, which lasted for 9 years. The total indirect damage was hard to estimate, but the direct damage amounted to around $6 billion US dollars.

Hence, the economic consequences of pyramid schemes include:

- Damage to the real sector – the financial losses of the participants result in the reduction of the population’s propensity to consume and save (and, consequently, to invest) in the country. More often, the organizers of schemes spend the collected funds or invest in other countries insofar as to avoid possible legal action in future. As a result, the funds collected through pyramid schemes, which sometimes amount to huge volumes, directly reduce the GDP of the given country;
- Damage to the financial sector – financial pyramids may have a negative impact on the financial system in two ways. First, such schemes absorb savings of the population, which would otherwise be invested in the financial system in the form of deposits, securities and etc. Second, organizers of financial pyramids sometimes intentionally discredit the financial system by presenting their schemes as an alternative and more preferable in terms of profitability and other measurements in comparison with those of banks, investment companies or other financial institutions.

3. Regulatory Mechanisms for Combatting Financial Pyramids

National legislation of RA

Article 189.1 of the Criminal Code of RA that criminalizes the processes of creation, organization and management of financial pyramids has come into force since January 8, 2017.

Furthermore, these actions may be carried out with regard to both the whole pyramid and a part of it. Such approach is due to the consideration that there are a variety of financial pyramids, some types having separated parts, which in turn, have their own creators, organizers and managers (for example, financial pyramids operating at a regional level, have separated regional parts, which are created, organized or managed by different groups of people, or that can be explained by the "The eight ball" model scheme described above).

"Financial pyramid", is defined as activity (except for the activities performed with a special permit (license)) aimed at the involvement of property, in which the proposed material benefit of the investors of the property or the persons paying for the property or the service offered in the pyramid, is solely determined by the property involved by the new investors without an intention to use it in real business activities. The definition of "financial pyramid" is formulated in such a way that it considers the different varieties of financial pyramids: putting special attention on the financial pyramids, where some kind of property or service is offered for the payment or investment, however the proposed material benefit of the investors of the property or the persons paying for the property or the service offered, is solely determined by the property involved by the new investors. Hence, the prohibition of financial pyramids in RA is aimed toward the criminalization of the processes of creation, organization and management of the financial pyramids, which use the network marketing model scheme.

International Practice

In the international context, some countries consider the operation of financial pyramids as an organization of games of chance. For example, in the US and Great Britain, organized pyramid schemes were forbidden through this specific mechanism. In the US, the Lottery Statute (United States Code, Section 1302) regulates this area by clearly forbidding the activities of any individual, who does not have a registration for organizing games of chance, which incorporate the following three main elements specific to games of chance:

- *Consideration* is the entrance fee paid for joining the scheme;
- *Prize* is the monetary or other gain expected from the participation in the scheme;
- *Chance* is the occasional nature of the possible payout from participation in the scheme, which depends on the level of the participant in the pyramid, as well as on the actions of the participants at lower levels.

It is worth mentioning that this classification is not applicable to financial pyramids masqueraded as network marketing schemes intended for the distribution of certain goods, since no special permission is required for this type of activity.

Some financial pyramids were forbidden in the US by classifying their operation as a violation of the rules for the public offer of or organized trade in securities (stock exchange trade).

In a number of other countries, such as Canada, France, Great Britain and the US[5] financial pyramids are forbidden based solely on the fact that they have been recognized as being pyramid schemes. Thus, the Competition Act in Canada defines specific characteristics of pyramid schemes, which, once detected, entail criminal liability for the organizers. This

[5] In spite of a prohibition at the federal level, most of the states enacted legislative acts directly prohibiting operation of pyramid schemes.

has been done to introduce a clear distinction between network marketing and pyramid schemes. According to the Act, it is a criminal offense to:

- Give consideration for the right to receive compensation for recruiting a participant into the scheme;
- Establish a condition for the purchase of certain products for participating in the scheme;
- To sell product(s) to a participant in an amount that is commercially unreasonable;
- Fail to provide a buy-back guarantee for the products supplied to a participant.

Similar provisions have also been established in normative legal acts of France and Great Britain. However, Section 327 of California Penal Code[6] defines any scheme as an offence based on the fact that it operates on the basis of an endless chain of new participants.

4. Role of Financial and Non-Financial Institutions in Combating Pyramid Schemes

Most often, the turnover of the funds involved in the above-described financial pyramids is facilitated through different financial institutions. Moreover, at any stage of the scheme, the organizer may use financial and/or non-financial institutions to convert the funds obtained from the investors (participants) into other assets and distribute them in a way controllable by only him.

The role of financial and non-financial institutions in combating the formation and operation of financial pyramids might include:

- Disclosure of financial flows, their directions, volumes, dynamics, and participants within the pyramids;
- Exchange of information between themselves and dissemination of information to competent public authorities on potential pyramids;
- Building of public awareness, based on the national and international experience, by spreading "anti-propaganda" among the members/potential participants of the schemes.

[6] This section sets forth the following: *"Every person who contrives, prepares, sets up, proposes, or operates any endless chain is guilty of a public offense, and is punishable by imprisonment in the county jail not exceeding one year or in state prison for 16 months, two, or three years. As used in this section, an "endless chain" means any scheme for the disposal or distribution of property whereby a participant pays a valuable consideration for the chance to receive compensation for introducing one or more additional persons into participation in the scheme or for the chance to receive compensation when a person introduced by the participant introduces a new participant. Compensation, as used in this section, does not mean or include payment based upon sales made to persons who are not participants in the scheme and who are not purchasing in order to participate in the scheme."* (http://law.onecle.com/california/penal/327.html).