SIU Journal of Management, Vol.1, No.2 (December, 2011). ISSN: 2229-0044

The Real Causes of Inflation and Perspectives for Overcoming Them: The Case of Armenia

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Abstract

The consumer price index (CPI) is an inadequate measure of inflation in Armenia, which is a transition country that faces a number of difficult challenges. The increases in food prices that most affect lower income Armenians has been referred to as agflation, and this concept would better embody the issue of inflation in the country. Changes in the measurement of inflation should be placed within the context of the necessary creation of a developmental model that will help the country to takes the next steps towards economic and social development on a sustainable and inclusive basis.

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1. Introduction

The history of Armenia is a long and proud one but one that has led to the dispersal of many of her people into a diaspora. Nevertheless, cultural practices have been retained despite the changes made during the Soviet era. Armenia's economy was considered to be one of the most advanced in the Soviet Union but much of its competitiveness was lost in the transition from planned to market economy. The economy has become even more vulnerable as a result of the negative impact of the global financial crisis, unexpected fluctuations in the world economy, including increases in the consumer price index (CPI) and the decline of the purchasing power of the population. In general understanding, inflation and CPI increases are like peas in a pod. However, the daily lives of people encourages them to see inflation in terms of basic food products (the 'food basket') and everyday commodities, while CPI may include hundreds of products intended for both individual and commercial use (e.g. coffee, copper, construction materials and butter – all together).

Consequently, inflation or CPI cannot be easily ranked among possible threats to the economy. Under prevailing conditions, where the currency is no longer backed by gold or other reserves and, in a certain sense, represents a state obligation, inflation could even be considered to spur the dynamic growth of the national economy to the extent of a range of 5-6 annual percentage points. Additionally, year-end increases in the consumption of goods and in production costs could well be considered a natural phenomenon requiring additional monetary resources. Realizing that available monetary resources could be insufficient to meet relatively higher household demands at the conclusion of the year, commercial enterprises in developed countries ordinarily offer consumers the benefit of considerable price discounts, thereby augmenting their purchasing power and stretching their limited resources. Conversely, in Armenia, prices move in the opposite direction: that is, they increase, primarily because of sellers' confidence in Armenian consumers' disposition with respect to purchasing their goods under any circumstances, even at the cost of obtaining them on credit.

Price inflation of up to an aggregate of 10 percentage points could be beneficial in certain cases, provided the average monthly increase does not exceed one percentage point. Inflation that occurs at a steady and gradual rate of increase is often referred to as “creeping” inflation. This type of inflation normally occurs in conjunction with increases in money supplies, which accelerate the payment cycle and lower interest rates, positively affecting investments, as well as production growth and modernization, consequently boosting a country’s economic competitiveness. Accordingly, growth in production induces equilibrium between money and commodity supplies, even under conditions of relatively higher prices. Certainly, there exists a danger from deregulating “creeping” inflation, particularly in countries that have lower levels of production and where there are no functioning mechanisms for addressing structural distortions in the economy.

Thus, in at least two probable situations, price inflation may cause serious harm to state economic security. The first of these situations occurs when inflation is in double digits and gradually becomes uncontrollable, harming both local producers and local consumers. The second is the so-called stagnation, which occurs when a high rate of unemployment is exacerbated by the high rate of inflation.[1] Clearly, Armenia is currently challenged by both of these negative phenomena.

2. Inflation in Armenia

It is important to articulate the current state of inflation as portrayed by official state statistics. According to public data released by the Republic of Armenia’s (RA) National Statistical Service (NSS),

[1] And when stagnation is accompanied by a decrease in production, then there is what is called “stagflation.”

consumer prices increased by 1.8% in December 2010, representing an increase of 0.2% over the previous month. This increase is derived from a 3.7% increase in food prices and a 0.1% increase in the prices of non-food consumer goods. Parallel to these increases, service sector prices have decreased by 0.2%.

Observation of the data over the longer term reveals that price increases for the whole year aggregate to 9.8%, which is constituted as follows: food items (including alcoholic beverages and tobacco): 14.6%; non-food items: 5.6%; and services: 4.2%. Considering that 2005 is used as base year for price comparisons, it is worth noting that, according to the NSS data reported in January 2011, overall consumer prices have increased by 37.7% and food prices have increased by 44.3% (CPI of Armenia, 2011: 5). From the standpoint of economic security, there is no question that these numbers are far from being within tolerable limits. Further, the consumer price index has far exceeded the limit of 5±1.5% as established in the enacted "2010 State Budget of the Republic of Armenia." Our concern is not only that consumer price increases are merely a consequence of very significant economic issues, but also that there is a need for correcting the methodology of calculating the CPI.

Few people are aware that the CPI is not primarily involved with fluctuations in prices of the group of ten necessity goods, which would allow inferences to be made about the level of poverty and prices related to the consumer basket for minimal wellbeing. Instead, CPI calculations incorporate the prices of 470 commodities and services (including copper, molybdenum and gold), the majority of which are not included in the daily consumption patterns of the middle class, let alone being those segments of the population who live below that level or who are at the threshold of poverty. As a result, we deal with a price indicator that is calculated based on various non-food commodities and services that have a relatively low demand in the consumer market. In this situation, it is hypothetically possible to obtain a more tolerable price increase (when individual commodity price increases are amidst decreases in the price of other goods and services) even when a double-digit inflation exists in individual prices of food items that characterize the consumer basket.

Nevertheless, the use of such methodology — a methodology supported by international organizations — would not have bewildered the average citizen if the actual price inflation of the consumer basket for minimal wellbeing were disclosed along with the CPI of 470 commodities and services, and if targeted measures were initiated for curbing inflation. According to official NSS data, prices of the above referenced consumer goods reflect the following changes: bread 12.7%; meat 16.4%; seafood -5.3% (decrease); dairy products 20%; eggs 27.4%; animal and vegetable oils 10.6%; fruit 22.6%; vegetables (including potatoes) 35.6%; sugar 1.9%; coffee, tea, cocoa 1.9%; confectionery 6.5%; other food items 2.5%; and non-alcoholic beverages 0%.

From a methodological perspective, it is important to consider variances in the consumer basket of households from different communities (considering that significant differences in consumption are evident between Yerevan and distant rural communities); NSS has selected one community from every district (*marz*), but rather than surveying villages, it has opted for cities with rather average standards of living. Besides, different consumer groups — such as those at the threshold of poverty, the lower middle class, middle class, and well-to-do groups — have intrinsically different spending dispositions with respect to the same commodity. Further, the NSS has presented averages rather than accounting for differences among different segments of the population. The vulnerability of this methodology is partly ameliorated by the NSS decision, accepted on January 25th, 2011, to "transition from the cumulative method of collecting, aggregating, and reporting macroeconomic indicators to a discrete monthly encapsulation," according to which a new indicator of economic activity will be tracked beginning in January.

Notwithstanding the above, public perception of the degree of reliability of the data does not appear to be improving. It is quite obvious that potato prices have not increased by 18.8% or even by 35.6% since, compared to 2009 prices, these prices have increased five-fold, i.e., by 500%; similarly, those of buckwheat by 300% and apples by 500%. Similar inaccuracies also exist in reported price increases for other consumer goods (such as cheese, eggs and meat). This simply means that with 'averaging' we get a more moderate consumer price index. It is important to note also that the reported decrease in annualized seafood prices does not take into account the fact that, in the earlier months of the year, consumption volumes of frozen seafood, imported at relatively cheaper prices, are simply beyond comparison with quantities of seafood imposed upon the consumer at much higher prices in the month preceding the New Year. Consequently, seafood prices have increased rather than decreased (as was reported). This is also true for several other products. Further, variations in consumption volumes during different months of the year pose serious methodological concerns that must be resolved.

Within the framework of the current strategy, the objective for calculating inflation is to capture the movement of price indices over 12-months (i.e., price inflation in a month compared to that of the same month in the previous year, which, as a rule, is normalized relative to the CPI adjustment in December of each year; even though the Central Bank releases information on price fluctuations during each year on the basis of analysis), which does not reveal the total picture on actual consumer purchasing power. It is important also to note that deviation of the average rate of inflation from the planned rate is a leading cause for intervention by the Central Bank and for government regulation.

Moving from the theoretical-methodological issues to the real causes of price inflation, it is important to classify the causes of inflation on the basis of:

a. Objective
b. Subjective

as well as by:

c. External drivers
d. Internal drivers

According to this classification, objective factors could be triggered by both external as well as internal drivers. This is also true in the case of subjective factors contributing to inflation. Analyzing the record high rate of inflation, one can naturally arrive at the conclusion that one should not look for the causes of the high rate of inflation only within the borders of Armenia. Stated otherwise, there exist objective reasons for accepting, albeit reluctantly, the rules of the game imposed from the outside. As an open market economy, Armenia has no other choice but to accept prices set in the world market, especially when importing commodities from abroad. This involvement provides ground for speculation with rising international prices. On the other hand, however, declining international prices, as a rule, are not even sensed by Armenian consumers. Consequently, one of the objective reasons, if not the decisive reason, of the mounting rate of inflation is the international upsurge in commodity prices.

Certainly, there are countries that are able to withstand such external influences through social protection programs that mitigate the adverse impact of inflation — in the form of subsidies from state budgets to socially vulnerable segments of the population — at the minimum, by making the consumer basket for minimal wellbeing more affordable. Such an example is the food-stamp program in the USA, which helps qualifying low-income households, including illegal aliens, to purchase food supplies using federally-funded food stamps distributed in accordance with the number of household members. During times of tough economic reforms in the early nineties, Eastern European and several CIS[2] countries, including Armenia, resorted to similar programs to protect their citizens from external pressures that caused food prices to soar. However, such measures alone do not provide permanent solutions over the long-run. One of the most important state concerns is the challenge of finding solutions to social problems through sustainable development programs rather than by way of such artificial reliefs. Besides, it is not reassuring at all to learn that Armenia has only scored slightly better compared to the more damaging effects of inflation recorded in neighbouring countries.

Conceivably, one of the most important external-objective factors is the drop in the production of certain foodstuff due to inclement weather conditions and natural disasters. Yet another notable objective factor is the adverse impact of the global financial crisis and consequent decline in the purchasing power of consumers in different parts of the world, as previously reported in official statistics.

Finally, it is important to emphasise the significant devaluation of the U.S. dollar among external-objective factors. The large supply of U.S. dollars in circulation in 2010, not backed by commodities, resulted in its devaluation in Forex markets. The Euro exchange rate began to rise despite all kinds of negative speculation, including predictions of its failure just a few months earlier. Against an exchange rate of $1.187 to the Euro in the summer of 2010, it grew to an exchange rate of $1.423 in November of the same year.

Considering current trends, it would not be difficult to project that the exchange rate for the Euro against the US dollar may fluctuate between $1.20 and $1.40 in 2011, quite possibly within the upper limits in the range in the latter months of the year, with some sagging occurring in the first two quarters of the year.

[2] The Commonwealth of Independent States replaced the Soviet Union in 1991 and most members left during the first decade of the 21st century.

This concludes the short-listed external-objective causes of inflation. In contrast, the external-subjective causes are overpowering compared to the preceding ones and could have a greater and more lasting effect on people, thereby rendering the current serious inflation but a prelude to forthcoming economic setbacks. The argument refers to the large-scale subsidy policies of industrialized nations in the absence of supporting economic norms. In other words, prices artificially reduced by means of subsidies and resultant increase in the competitiveness of such commodities could be ranked among the most critical issues in global economics. Such pricing strategies not only weaken developing economies — where lower production and labour capacities negatively affect the competitiveness of several commodities, especially agricultural products — but also impair the development of the world economy. Further, such policies contradict the principles of the liberal ideology developed nations exhorted transition economies to use. Consequently, farmers are not only encouraged not to engage in agriculture but to cease producing such agricultural products that are aimed at regulating prices in a given country. After all, the subsidization of agricultural products creates competitively uneven conditions especially for those developing countries that are at different stages of economic development and where the subsidization of the same agricultural products is not at an equal level (from a financial position).

According to World Trade Organization (WTO) assessments, consumers and governments of wealthy nations spend approximately US$350 billion per year to subsidize agriculture — enough to fly their 41 million dairy cows first class around the world one and a half times (WTO, not dated). According to a different analysis, the amount spent on a single cow in EU countries can exceeds the per capita income of an entire village in the Russian Federation.

Surely the above listing is not exhaustive of the economic and social harms caused by such policies. In effect, the production of certain goods supplied at competitive prices is becoming more costly and increasingly dependent upon the subsidies allotted from the state budget of a given country. If such subsidies decrease, particularly as a result of the global financial crisis, then the production of those commodities would naturally decrease. This would result in a deficit in the supply of those commodities in the world market, which would naturally cause prices to increase.

In discussing the external-subjective causes of inflation, it would be remiss to ignore the artificial supply shortages of certain commodities created by countries that have a distinct advantage in the production of such commodities. This is a phenomenon totally unrelated to the prevailing crisis. Such commodities include petroleum, gas and other energy sources, gold and diamonds. Such phenomena are likely to occur more frequently when there are strategic alliances among producers of the same product, i.e., cartels aimed at protecting the shared interests of members, such as the Organization of Oil Producing Countries (OPEC) and others. Food markets are not exempt from similar pricing schemes. Currently, there are serious concerns not only with respect to rationed commodities but, also, regarding the economic security of countries such as China and India, which are exporters of food commodities.

The World Food Programme (WFP), the international food aid branch of the United Nations, has referred to the current food crisis as the "quiet tsunami" that could throw a minimum of 100 million people into the claws of starvation. Economists at Goldman Sachs have coined the economic term *agflation* to describe the rapid increase in the prices of food that occurs as a result of increased demand from human consumption. In the opinion of experts of this Manhattan-based organization, *agflation* was 26% in 2006 and 41% in 2007, before falling slightly in 2008-2009 and then reaching a record high of 49% in 2010 (Trefis, 2011). This is troubling both for industrialized nations and international organizations. Great Britain's former premier Gordon Brown appraised the rising food prices by positing that this would lead to effects equally detrimental as those caused by the financial crisis. In turn, the Secretary-General of the United Nations, Ban Ki-moon, has declared food price inflation to be a global crisis, which could have severe impact on the world economy and international security and necessitating coordinated actions for containing it. In this respect, more than 50 countries have instituted sanctions with respect to curtailing the volume of their food exports. For instance, in the USA, for the first time since World War II, restrictions in the volume of food sales have been instituted in large retail chains, such as Costco and Sam's Club.

Clearly, the economy of Armenia is also showing signs of this *agflation*. Consequently, in addition to the assessment of international trends, it is important to analyze the internal causes of inflation. Research demonstrates that the internal causes stem from objective as well as subjective constructs.

First, a look at the objective constructs: a number of these objectives evolve not just from the fact that the internal free market is directly connected to the international market but, also, from the fact that Armenian commodities are not exported at prices set by the local economy but at prices shaped in the world market. To get a better picture of the degree of dependency upon world market prices, it is necessary to take into account official NSS data, which show that at January 1st, 2011, imports totalled (3,782.9 million AMD),[3] more than thrice total exports (1,011.4 million AMD) (Government of Armenia, 2011). This shows that the local consumer is purchasing commodities at prices set by world markets, augmented by transportation costs, customs duties and the importer's profit margin (often in the form of excessive profits). Further, this assumes that all businesses are fully abiding by the rule of law, which theoretically excludes market effects caused by the shadow economy, monopolies and smuggled commodities. Including those additional factors contributing to price inflation would have necessitated a separate analysis.

[3] The Armenian Dram (AMD) is equal to approximately US$0.0026.

Despite the above, external factors affecting local price inflation could well be unpredictable if, on the one hand, developments and trends in the global market were not taken into consideration and, on the other, they could also be predictable in anticipation of forthcoming impacts, creating opportunities for government agencies and businesses to take corresponding measures to inhibit possible shocks.

The next objective factor contributing to the high inflation is the insufficiency of state financial resources. In turn, this speaks to the problems of indexation with respect to the minimum wage, pensions and social benefits proportional to the consumer basket for minimal subsistence. Finally, one must take into account the effects of inclement weather conditions and the ensuing inability of farmers to make up even partially for inflation imported from the world market. Additionally, there are other objective factors that have a less significant effect on inflation (including a decrease in the volume of land used for cultivating certain plants and the potential effects of degradation of existing agricultural land). Based on calculations, wheat fields shrunk by approximately 50,000 hectares in the period 2003-2010 and potato fields by 10,000 hectares in 2010, the latter as a consequence of the drop in potato prices in the previous year and the ensuing decline in the profitability of growing potatoes. Similarly, vegetable fields have contracted considerably. These factors culminate in a decline in production of certain food items, which consequently inflates their prices.

As for the internal-subjective or arbitrary causes, their mere enumeration could counterweigh the external-objective as well as external-subjective factors and the detrimental outcomes they generate.

Although international reports rank Armenia among the liberal economies, it is evident that some seemingly invisible obstacles have been created in the market of certain commodities preventing potential new entrants from penetrating those markets. Such market limitations are among the internal-subjective factors contributing to excessive inflation in various commodities. On several occasions, the Government of Armenia and the Central Bank have indeed discussed the existence of such hidden powers that manipulate prices in the local market.

The valuation of the Armenian currency and high prices, particularly those of imported commodities, are part of the strategy of importers to realize excess profits in foreign as well as local currencies, but are also shaped by the high level of centralization of the economy of the Republic of Armenia, which serves as a precondition for those enterprises with market dominance and monopolistic power to collude in exercising anti-competition and counter-market practices and exploiting their market positions. This is substantiated by the official data of the State Commission for the Protection of Economic Competition (SCPEC) of the Republic of Armenia. The results of SCPEC's 2010 market analysis pertaining to 12 food items show that 7 of those are highly centralized (monopolized) and the remaining 5 are partially centralized. There is no mention of minimally centralized consumer markets. For instance, fluctuations in prices of cheeses are of significance. According to SCPEC records, there are 78 registered cheese businesses in the Republic of Armenia, not accounting for many village farmers that also make cheeses. With so many entities engaged in cheesemaking, it seems unfeasible that they would orchestrate prices, but organized arrangements of inappropriate price-setting have been detected — different cheese producers have increased their prices, virtually simultaneously, and roughly by equal amounts. In principle, cheese prices should have increased a few months later and by 150-200 AMDs at the most, following increases in milk prices. As the saying goes, "there is no free cheese, except in the mousetrap."

The same is true for free or bargain eggs. In the summer of 2010, when the retail price of eggs dropped below cost, it was evident that the large producers had colluded in order to push out the smaller outfits, and they would resort to profiteering soon after monopolizing the egg market. Indeed, it did not take long for the egg producers to increase prices tenfold compared to the summer, blaming the increase on different fowl ailments. Rarely does one come across such price increases in the world market.

Based on assessments by international and local experts, the ineffective system of competition protection and prevalence of corruption have placed a significant segment of the Armenian economy in the hands of semi-monopolies or oligopolies, which inevitably inhibit the development of a socially-oriented competitive national economy. For example, the prevailing situation in the Yerevan central markets of agricultural products deserves separate analysis. The prices of fruits and vegetables offered at the so-called “nighttime” wholesale markets are markedly lower than the unanimously-set prices imposed on consumers only 3-4 hours later. Of course, this does not denote the classical understanding of profit-making. Rather, this relates to the phenomenon of “greed.” Here, the difference between purchase and sale prices represents a 75-100% mark-up, reaching and exceeding a 200% mark-up in select instances. Obviously, it would be futile to explore here the notion of competition or look for other objective price triggers. In fact, this represents the daily routine of a few natural persons, the ‘oligarchs’ (or magnates) of sorts, who more or less forcibly acquire the entire supply of commodities produced by farmers setting unduly high resale prices imposed on consumers on grounds of administrative obligations. One would think that the prices set at dawn determine the day’s commerce as if the day were to break not for the villager but for the oligarch. Such manifestation is extraordinary even when compared with the economic red tape that existed under socialism. In fact, this resembles the unscrupulous treatment of vassals by feudal economic lords and, in modern times, it could be regarded as an economic crime, which is undoubtedly defying the regulatory and supervisory functions of the state and weakening the economic and social foundations of statehood.

Generally, people understand inflation as the result of a single phenomenon, whereas it is actually the result of several phenomena interacting with each other. For example, inflation may occur as a result of product deficit (i.e., when there is excess demand versus the total quantity produced/supplied of that product), and it may also occur as a result of escalating production costs caused by the underutilization of production inputs — under prevailing pricing arrangements, the producer cuts back production supplying lesser amounts of what costs more to produce. In both of these instances, consumer expectations change, also affecting the consumer mindset and behaviour. Such occurrences are not at all foreign to Armenia. Even based on unfounded information or rumours concerning potential price increases of a commodity, consumer demand for that commodity significantly increases, providing entrepreneurs and merchants with a timely opportunity to increase prices rapidly. Further, research results have shown that a 6-7% plunge in the quantity of a commodity from the consumer market not only results in routine inflation but also creates panic. Consequently, consumers try to stock up on that commodity, thereby creating a much greater shortage in the supply of that commodity in the consumer market and pushing up prices even higher.

Returning to the roles of state regulation and supervision, it is necessary to consider those regulatory instruments, such as customs, taxes and monetary strategies that influence inflation within the framework of national competitiveness. Despite continuous attempts to regulate the state taxation system and the mechanisms implemented to that effect year after year, it is premature to characterize the system as being effective. Whereas steadfast management targeting the curtailment of the shadow economy would be productive, such policy is being implemented only with reservations, affording "privileges" to businesses that are already in favourable positions even before those advantages. As for actual tax privileges, those are not even permissible from a legal-regulatory sense at the present time. In other words, there is no discrete and targeted policy aimed at the development of a specific sector or sub-sector.

Consequently, small and medium enterprises are shutting down, with the obvious impact that the shadow economy is growing and, consequently, state tax revenues are decreasing; in order to compensate for the revenue shortfall in the state budget, the tax burden is growing and progressively being shouldered by the fewer remaining enterprises. In turn, those additional taxes are augmenting the cost of goods and services, thus contributing to the mounting inflation.

Among the real causes of inflation are the adverse impacts caused by smuggled commodities and inefficient customs codes, as well as the low performance of the tax revenue collection system. Additionally, in the opinion of some experts, there are inflationary risks involved in the configuration, computation and documentation procedures of the value-added tax (VAT).

The fundamental issues surrounding access to credit by the real segment of the economy play no less significant role in current levels of inflation. The largest proportion of approved bank loans in 2010 (a total of about 806 billion AMD) went to the commercial sector (21.6%). Further, financing of trade, services and consumption together make up 41% of total bank lending, compared to 50 billion AMD in loans (6% of total loans) approved for agriculture (which exceeds the total of loans to that sector for the same time period in 2008 by just 17 billion AMD, and by 4 billion AMD compared to loans disbursed through September, 2008), and 174 AMD billion for manufacturing (representing 21% of total loans) (Central Bank of Armenia, 2011; Orensdir.com, 2011). These numbers attest to the lesser participation of the banking sector in the development of the production industry. In that regard, it must be questioned whether such lending patterns stimulate or dampen inflation.

An additional internal factor contributing to inflation concerns the implications of the currency exchange policy in Armenia. In general, the devaluation of the local currency over the short term could increase the competitiveness of the national economy and foster exports but, in the longer term, it could adversely influence prices and lead to inflation. Clearly, the relatively larger quantities of exports generate commensurate inflows of foreign currency, which undeniably influence the foreign currency exchange rate, augmenting the local currency's purchasing power and, hence, also its value. In fact, a pegged currency (fixing the foreign exchange rate at any level relative to an external currency or currencies) raises serious concern.

In Armenia, the years 1994 and 2008 could be considered as periods of hyperinflation and super-valuation of the local currency. In 1994, the dram was devalued by 3162%. The Central Bank of Armenia and the government jointly resorted to obtaining financing through the World Bank's credit programmes. Naturally, the most essential issue for the Central Bank was to pick the most effective financing strategy, i.e., selecting two out of three policy alternatives within the standard deadline: fixed exchange rate or guarantee of a narrow fluctuation margin; independent credit policy and, consequently, choice of appropriate strategy; in addition to the free flow of capital. Irrespective of monetary policy, the strategy for free capital movement should allow for a floating exchange rate.

At this point, it is important to note that the amounts of money placed in circulation, including inappropriate credit policies, internal as well as external national debts and emergent non-production costs, could trigger devaluation of the local currency and steep price inflation. Occasionally, devaluation of the local currency may render locally produced goods more inexpensive for outsiders, while its valuation has the opposite effect in external markets. In other words, when the country's local currency is devalued, exports become cheaper, while imports are less affordable for residents. Conversely, valuation of the local currency has the opposite effect; foreigners pay more for goods produced in the subject country, while local consumers pay less for imported goods.

Studies have shown that severe crisis has prevailed in countries pursuing all three goals simultaneously (e.g. Brazil, Argentina and Russia). In the event that the Central Bank chooses to adopt a fixed exchange regime and oversees its performance, then it must also assume responsibility for the risks associated with the peg's clarity and predictability for traders, as well as be prepared for possible external shocks and massive speculation. On several different occasions, the Central Bank has had to intervene with short-term currency revaluations intended to safeguard competitiveness and in pursuit of other motives. In the current phase of economic growth, targeting a relatively low level of inflation would involve revaluations of the nominal exchange rate of the Armenian Dram.

Other external causes that should also be noted include:

- Increases in the price of oil: oil prices have been at record highs since the 2008 crisis, fluctuating at around US $100 or more per barrel (ProFinance Service, 2011) and as high as US$200 per barrel in Egypt (РБК, 2011), given the current political unrest in that country;
- Increase in demand for food: based on projections of the world population reaching 7 billion in 2011 (Sipe, 2010);
- Decrease in world grain stocks: the lowest levels were recorded in the past three decades along with the highest prices;
- Increases in production costs of food items (География, not dated).

Other noteworthy factors include:

- In the world market, price setting schemes are fashioned not as much by individual companies but more by political and economic monopolies;
- Use of some agricultural crops for obtaining biofuel, such as biofuels derived from sugar cane, maize and other plants;

Under prevailing conditions of financial-economic crisis and conflicts in several parts of the world, increases in military and other government expenses are, naturally, imposing additional monetary demands, which do not correspond to supplies of commodities in circulation.

Next, the research turns to several internal causes pertaining to the rate of inflation in Armenia, as follows:

- Declining economic ties with neighbouring countries (in 2010, particularly, exports to Georgia and Iran have decreased, although imports from these countries have increased (Statistical Office of Armenia, 2010), resulting in new outlays and additional inflation);
- Corruption and bribery: officials are now demanding larger bribes or so-called kickbacks that are directly contingent upon the unpredictability of their tenure in office, creating direct parallels between officials' length of tenure and dependency on bribes;
- Weak economic and institutional environment: there are no effective reserve mechanisms; interest paid on deposits by commercial banks are minimal compared to the rate of inflation;
- Increase in public consumption: this increase results not so much from increased incomes than the growth of unearned income (including transfers from abroad, foreign grants, humanitarian aid and other types of financial assistance);
- Existence of large businesses involved in fixing production costs and setting prices in certain sectors of the economy;

- Increase in gas prices, manifested in the increasing unit costs of almost all commodities and services;
- Export of Armenian food products, including cheese, lamb, and certain kinds of fish, is leading to declining supplies of those goods in the local market and, therefore, to increases in prices;
- Reduction in the volumes of local production, under conditions of a stable money supply, which leads to price increases, on the basis of supply and demand conditions.

In common with many other cases, such comparisons could measure the adverse impacts of inflation against those of other countries.

3. International Comparisons of Inflation Rates

At present, prices in Georgia are lower than those in Armenia. In the month of September 2010, for example, inflation was at 1.2% and inflation of food items was 2% above the previous month. At the same time, prices of fruit and vegetables have dropped (by 7% and 2.8% respectively). Inflation rose abruptly at the end of 2010 and into the beginning of 2011. Further, there is a noticeable outflow of capital from Armenia to neighbouring Georgia. Meanwhile, in Azerbaijan, price increases are much higher than in Armenia, to the extent that the same commodity costs an additional 30-180 AMD in the former compared to the latter and often far more even than that.

International experts have observed that, in the recent past, food prices have been continuously on the rise. Sharp inflation of food prices has also been observed in EU countries. Prices of bread and dairy products have risen by 21% in several Eastern European countries. The poor wheat harvest has caused bread prices to increase by some 11.5%. Dairy products have already hit dollar ranges rather than cents in EU countries; for example, 250 grams of butter now costs €1.17 compared to what used to be 75¢. In Spain, the price of milk has increased by 8.2%, and fowls by 11.4%, among other increases. Yet another remarkable phenomenon is that, in Italy, pasta prices have increased, with inflation generally having increased prices by 5% in one year. The price of butter in the Czech Republic has increased so much (by about 35%) that consumers are switching to margarine. Substantial inflation in foodstuffs is also observed in the Russian Federation, where increases include oil (13.5%), pasteurized milk (9.4%), dairy products (7.9%) and sour cream (7.5%).

The price of a bushel of wheat in Chicago's Mercantile Exchange increased sharply at the beginning of the agricultural new year (July 2010), hitting 2008 pre-crisis levels and remaining at around US$8-9. Similar increases, derived from shortages in supplies of agricultural products, as a result of inclement weather conditions and high inflation, have also been observed in the prices of sugar and rice in international markets; while prices of animal fats in international markets continue to rise at a steady pace.

According to a recent report by the UN Food and Agriculture Organization (FAO) on the 2010-2011 situation in the international food market, all countries must be prepared to face challenges imposed by new price increases (FAO, 2011). Further, according to data published by the International Grains Council, grain production for 2011 is projected to reach around 1.725 million tons, which is a reduction of 3.5% on the previous year's production. This decrease is primarily driven by the projected insufficient maize harvest.

On the demand side, the consumption of grains is projected to exceed that of the previous year by 1.6%, at 1.79 million tons. Consequently, as a result of a projected increase in consumption and a decrease in production of grains, stockpiles may decrease by 61 million tons, falling to 340 million tons. It might be noted that the major producers of grain are Argentina, Australia, Canada, Europe, Kazakhstan, Russia, Ukraine and the USA. According to projections, these countries are expected to decrease production by 55 million tons, declining to a record low since 2003. Considering such stock reductions in international markets, the 2011 harvest could have a serious impact on efforts to stabilize prices in the international market. Thus, the forthcoming behaviour of the agrarian sector could depend not only on the levels of yield in agriculture but, also, on macroeconomic indicators and the overall performance of the world economy.

The 2010 fluctuations in wheat prices correspond to price increases experienced for agricultural products. The drought in many wheat producing countries resulted in July price increases amounting to 70%.

Incidentally, demand for wheat has somewhat stabilized in recent months. However, it would be no surprise if the continuing drought in the USA and the torrential rains and floods experienced in Australia in the early months of 2011 culminate in a drop in the quantity and quality of the wheat harvest. Furthermore, India has introduced limitations on wheat export volumes, in spite of its excess stocks, whereas in China, the largest consumer of wheat, there is a continuing increase in local demand. Such factors, along with others, are expected to have serious impact on prices. In turn, the U.S. Department of Agriculture has projected that world wheat production in 2010-2011 is likely to be 644 million tons, which is a reduction of 5% on the previous year. Gross consumption is expected to increase by 10 million tons to a total of 660 million tons. Stockpiles could decrease by 76 million tons, considering the recorded declines in Russia and Ukraine.

At the same time, it should be noted that the volumes recorded in the second half of 2010 are not comparable to those of the world food crisis of 2007-2008. 2010’s shortage of supply, together with the projected reduced levels of production in Ukraine and Kazakhstan, are projected to offset the world surplus built up as a result of record high harvests in the previous two years. Further, fluctuations in the exchange rate of the US$ are expected to influence grain prices. In the event of a devaluation of the dollar, wheat prices would increase proportionately. China and Europe are currently considered to be the largest wheat producers and consumers; thus, price fluctuations also depend on the levels of economic development in those regions. At present, a bushel of wheat is priced within a range of US $7.5-8. In the first half of 2011, it could reach US $8-8.5, with some stabilization projected following such an increase.

In discussing the high levels of inflation, it is important also to consider social factors. The effects of high inflation vary by the levels of economic development in different countries. First and foremost, one must take into account that consumers in EU countries spend 12% of their income on food, even in times of crisis. The same is not true for Armenia, where average consumers still spend most of their income on food. Official data attest to the fact that consumers who are at the threshold of poverty spend 70 percent of their household expenses on food items (Statistical Office of Armenia, 2010).

Moreover, according to official data, the poverty level in Armenia is at 23.5%. According to experts, in the event of a continuing crisis and resulting decline in transfers from abroad, the situation could worsen, increasing the poverty level to 31%. Indeed, it would be undesirable if poverty were to intensify at such a pace, similar to what has taken place in Georgia (60%); but, today, such a tendency seems inevitable (Black Sea News, 2011).

According to National Statistical Service data, the average monthly salary in state organizations has increased by 4.2 percent reaching 85,000 AMD and that of private organizations has increased by 9.3 percent to 133,000 AMD; however, even such increases do not make measurable positive impact under the prevailing inflation.

In November, 2010, pensions increased by 2,500 AMD, which hardly alleviates pensioners' despair, considering that pensions have increased by 11% but prices of basic food have increased by at least twice that much. At this time, the social wellbeing of the socially disadvantaged segments of the population has remained unchanged and, in certain instances, it has worsened.

4. Policy Implications: What Is The Way Out?

It is plain that the most important measure for curtailing inflation is the well-defined configuration of the CPI and the effective realization of competitive advantages, which would reduce the economy's dependency on external factors, thus allowing the prediction and oversight of prices in a competitive environment, while fostering sustainable development. Currently, industrial production and, more precisely, mineral production, is a central issue in CPI changes; since the higher CPI resulting from a more intensive exploitation of mines over the long run would generate dependency on the development of a specific sector, as was the case a few years ago with Armenian dependency on diamond exports that represented more than half of total exports.

The disproportionate increase in prices of different commodity groups is leading to an asymmetry in normal profits, which, in turn, could lead to the outflow of financial and human resource capital from the country's production industry, in both manufacturing and agriculture, into the trade and services sectors and even into expatriation.

It is necessary to pay special attention to the methodology of calculating the CPI. Together with specifying in the CPI the 470 commodities proposed by international organizations, it is also necessary to provide the actual inflation rate in prices of necessity goods and to take steps targeted to curtailing them. The time has come for Armenia to compute the monthly *agflation,* that is, inflation of agricultural commodity prices, by taking into consideration the fact that the largest share of the current inflation rate lies in food price increases. Aside from the discrete calculation adopted by NSS effective January 2011 (which incorporates select cities from the 10 *marzes* of Armenia), it is necessary also to include calculations of price increases in rural villages, where price inflation has had a more severe effect.

Further, it would be practical to calculate the CPI not simply on a monthly basis but, also, by consumption quantities, taking into account the fact that such quantities have increased two and even threefold in a single month, compared to previous months of the year, and averaging consumption numbers would not reveal the full and correct picture.

Taking into consideration the degree of the prevailing polarization in the population, it is also necessary to calculate inflation by different consumer groups (such as those at the threshold of poverty, lower middle class, middle class or consumers with higher purchasing power). To the extent that it is possible, it would be helpful to incorporate into the CPI calculation methodology all possible external triggers (objective and subjective) as well as internal causes (objective and subjective). It is also necessary to compute, on a monthly basis, the cost of the consumer basket and the minimum cost of living, which, in accordance with the RA Law on the Minimum Cost of Living (Parliament of Armenia, not dated) would be applied to pension and minimum wage indexations.

To be informed in advance and be able to make accurate predictions, it is important also to compute such other indicators as the producer price index (PPI), which is a comprehensive index of wholesale prices of locally produced commodities (without accounting for distribution costs, VAT and other taxes); the cost-of-living index (COLI), a measure of the changing cost of a constant standard of living vis-à-vis changing incomes; and the capital costs index (CCI), which is a benchmarking tool used to track prices and forecast the performance of capital (securities, real estate and investment), which normally grows faster than the CPI, thereby providing opportunities for their owners to realize one-sided profits.

Of course, it would be desirable if statisticians were periodically to provide the public with the GDP price deflator, which includes the prices not only of goods purchased by consumers but, also, measures price changes with respect to similar commodities, the purchasing power parity (PPP) of local currency, as well as the Paasche index, which compares the cost of purchasing a basket of goods and services with the cost of purchasing the same basket in the base period (where prices are weighted by the quantities of the current period).

These measures would not only reveal actual price fluctuations but would definitely increase consumer confidence in monitoring prices, which, in turn, is an important factor in the market manifestation of positive consumer dispositions and behaviours.

In the battle against inflation, it is important to note that administrative constraints against price inflation could result in deficits in commodities, which are liable to increase in prices as a result of increases in demand or decreases in supply, in the absence of government intervention. Subsidization of price differences, realized in the interest of producers or consumers, could complement the rise in aggregate demand.

Given that the government's attention must focus on both restraining inflation and decreasing unemployment, it becomes important to take into consideration that it is unrealistic to accomplish both goals concurrently. If measures are taken to contain inflation, then there is the issue of decreasing the money supply, which leads to a decline in consumer purchasing power. In turn, this reduces production volumes of those goods that are directly affected by the decline in consumer purchasing power. Consequently, a decline in production increases unemployment. A similar reverse correlation also exists with respect to measures directed to reducing unemployment, as has been discussed by Nobel laureates Finn Kydland, Edward Prescott, Robert Lucas, Jr., and Milton Friedman.

It is equally important that the tax and customs codes, as well as lending policies of the country, become more purposeful and productive. In particular, in the current phase of the world financial crisis and in efforts to curtail the inflation by way of increasing economic competitiveness, importers of new technologies and equipment should be exempt from customs' duties. Subsequently, import duties could be levied on importers of new equipment parallel to the realization of increased profits and decrease in prevailing prices.

The fight against smugglers and the shadow economy would require a more effective campaign. It is abundantly clear that the shadow economy reduces state revenues, which must be supplemented with additional taxes levied on the remaining fewer businesses. In turn, additional taxes increase the cost of goods and services, contributing to the growing inflation. Adopting a progressive tax regime and converting to a distributive tax policy would also contribute to curtailing inflation.

Business firms operating in distant and especially border villages should be exempt from certain taxes. Further, subsidization of agricultural production should be increased for border villages. Given the limitations of state budgetary resources, it is recommended that subsidies in the form of irrigation water at no cost to farmers engaged in businesses aimed at strengthening national food security and agflation reduction.

Additionally, it is recommended that implementing targeted credit programs intended to finance business firms that are engaged in operations (particularly production operations) focused on promoting economic progress and enhancing competitiveness. It is necessary to direct loans received from international organizations, on a priority basis, toward the growth of such production operations, which would also supports efforts to reduce inflation. Further, it is also recommended that interest rates be determined on the basis of such business loans approved for production purposes.

It is also deemed appropriate that the government set the prices of select commodities included in the consumer basket for minimal subsistence and earnestly stimulate local production of those food items included in the minimum consumer basket.

Taking into consideration the fact that some proprietors of agricultural land acquired during privatization are not particularly interested in cultivating their lands, significant proportions have been taken out of production and have consequently become eroded or exhausted. In other words, the lucrative real estate transactions that some have enjoyed have hampered the growth of agriculture, considering that almost half of Armenia's terrain is not suitable for agricultural production. Consequently, in order to avoid such manifestations and promote the optimal use of natural resources, it is recommended that a progressive tax levied on proprietors who do not cultivate their lands should be instituted. Obviously, such taxes cannot be imposed on plots that are in use. However, those property owners who prefer to hang on to thousands of hectares of land for subsequent generations will be forced to pay progressively increasing taxes. This may drive them to consider cultivating their lands effectively or to sell them to those who better appreciate the actual worth of land. Otherwise, a paradox strikes: despite the fact that people engaged in agriculture represent almost half of the labour force, the country is forced to import foodstuff from abroad at significantly higher prices. A country's land resources should be optimally utilized for agriculture, by growing grains and other plants, according to an organized production plan that, ideally, permanently ends food shortages.

Concurrently, there is a need to compensate for price increases through adjustments of pensions and wages and, finally, by adopting a system of vouchers for necessity-foods distributed to the socially disadvantaged segments of the population (especially targeting those who get basic groceries on credit). Aside from these measures, it is necessary to monitor market prices closely to ensure that competition controls are adequately enforced by the Competition Protection Commission and similar entities.

Taking into consideration likely future increases in world food prices, it would be no surprise if the high levels of inflation lead to a situation where bartering of commodities may replace monetary transactions, at least for some time and in certain situations; this is a phenomenon that has prevailed in different periods in history challenged by various crises, e.g., during the difficult times of war in Germany and the USSR in the 20th century.

From the perspective of a more radical change, it is important to note that the best way for offsetting inflation is through the aggregate demand of the population. The latter would weigh against continuous price increases. If real demand falls, monopolies would be forced to bring prices down to acceptable levels in order to make profits rather than decreasing the volumes supplied. However, such a move is unlikely to happen in Armenia, given that there is no direct correlation between actual household incomes and the amounts of commodities consumed. The factor of unearned income (in the form of assistance received from abroad) would not allow the economy to grow in conformity with economic principles.

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