The Report provides a broad and deep analytical look at Armenia's competitiveness and uses growth diagnostic toolsets to uncover the binding constraints on long-term growth. The report is aimed at fostering informed dialogue among key stakeholders in public and private sectors to set an agenda for removing growth constraints, facilitating investments and enhancing competitiveness.
ACKNOWLEDGEMENTS

The National Competitiveness Report of Armenia 2013-2014 has been prepared by EV Consulting and Economy and Values Research Center.

The Report authors are:
Manuk Hergnyan
Sevak Hovhannisyan
Sona Grigoryan
Gohar Malumyan
Tamara Karapetyan

We express our gratitude to the partners and sponsors, who supported the publication of this Report, namely:

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
National Competitiveness Foundation of Armenia (NCFA)
Asian Development Bank

© EV Consulting, Economy and Values Research Center
2/1 Melik-Adamyan, Yerevan 0010, Armenia
Tel: +374 10 546434
E-mail: info@ev.am
www.ev.am, www.evconsulting.am
In 2007 a World Bank publication nicknamed Armenia the “Caucasian Tiger”. The fast growing Armenian economy, however, was hit hard by the global recession in the years to follow.

A large boom in construction and the non-tradable sector, as pointed out by this report, drove most of Armenia’s growth in the first years of the current century. However, the dramatic reduction in remittances income from the Armenian diaspora following the 2008 crisis, increased pressure on the country to finance their longstanding growth through other means. This became clear in the recession the country faced during the global crisis.

The challenges Armenia faces today in terms of achieving sustainable and inclusive growth, as this report suggests, relate to changing fundamentals of the economy. In order to achieve fast and longstanding growth, keeping low unemployment and eliminating the brain drain, Armenia must focus on expanding its economy by reaching other markets through exports of both goods and services.

The closed borders with Azerbaijan and Turkey definitely represent a bottleneck in the ability of Armenia to boost its manufacturing export sector. However, until there is a resolution to the political conflict, the growing IT sector and other services, for which transportation costs are not an issue, could represent opportunities to reach out to other foreign markets in the region and beyond.

In today’s globalized world, Armenia possess a valuable asset when it comes to reaching new foreign markets: the large Armenian diaspora. Recent research provides evidence on how large Diasporas could present important economic opportunities for developing countries. For instance, migrants tend to create networks to facilitate international trade and capital flows. Similarly, emigrants play an important role in the process through which their home countries gain productive knowledge, which leads to export of new products.

This new edition of the National Competitiveness Report of Armenia provides the right analysis needed to promote a nation-wide conversation between the government, the policy-makers, the private sector and the society in general. This national dialogue has the potential of putting Armenia back into the growth path, in a sustainable and inclusive way, for the next decade.
EXECUTIVE SUMMARY

Growth imperative

Unemployment, poverty, and emigration are the most critical social challenges for Armenia today. Thus, the economy’s ability to create and sustain comparatively well-paying jobs is the first and foremost test of its competitiveness. Competitiveness rests on the country’s productivity with which it uses its resources. Enhancing productivity requires economic growth, or else it would be at the expense of employment.

For competitiveness policy, we introduce the concept of the Target State of the Economy (TSE) as a state of the economy characterized by substantially narrow productivity gap with major competitor countries that provides a job to every employable person with a satisfying compensation eliminating the purely economic motivations to emigrate.

The GDP growth level has a very high stake in reaching the TSE: with a 7% average annual growth rate, the TSE can be reached in 10 years, whereas 10% GDP growth can ensure the same results by 2016. At the current annual growth rate of Armenian economy at 3-4% the TSE is reachable only by 2040.

Armenia’s investment growth constraints

Armenia’s struggle with the challenge of sustaining high growth rates for a long period will become one of directing massive investments into productive capital. The latter requires identifying and removing all key constraints to investment growth. For the analysis of those constraints we adopted Growth Diagnostics tool developed and propagated by Hausmann, Rodrik, and Velasco. The framework labels such bottlenecks as “binding constraints” and provides a comprehensive approach to identify them.

The study revealed that insufficient quality of human capital is one of the binding constraints to growth. Armenia does not have a shortage of educated people. The root cause of workforce-related issues lies in quality. A significant gap exists between the quality level of labor required by the economy and what is actually supplied by the current educational system.

Despite significant flaws, general infrastructure is not a binding constraint. Transportation limitations have a negative effect on Armenia’s international trade dynamics; however, it is difficult to estimate its impact as a constraint to growth.

Regulation failures in managing micro risks are critical constraints. Non-level playing competitive field acts as a powerful economic signal holding back business growth and entrepreneurship in Armenia. The shadow economy creates multilayered negative externalities on company and country levels.

Armenia’s economic development has entered an era where the pathway to further growth is mainly through exports, given the limited local market. Whereas, Armenia’s exports are characterized by low sophistication. The need for new FDI attraction approach is part of the renewed agenda for improving self-discovery processes in the economy.

Armenia’s growth challenges in the financial system

The fact that Armenia’s financial depth is about 6 times lower than the global level indicates that Armenia’s financial system growth path is uneven. The striking imbalance in the financial system of Armenia is driven by the overwhelming dominance of the banking system.
The level of *domestic savings* is rather low in Armenia and mainly short term in nature. The relative shortage of long money skews the available investments towards short-term projects. Pension system reform is expected to perpetrate the “prolongation” of savings in the country, however, the pension reform alone is not sufficient for a leap forward for domestic savings.

*Cost of finance* had a noticeable impact on the investment dynamics in Armenia, although this effect was disrupted during the crisis. Cost of debt in Armenia merely reflects the interest rates on loans, which can potentially skew the impact of cost of finance given that the supply of alternative financial instruments is limited.

The core issue lies in *one-dimensionality* of the financial system that fails to provide a wealth of instruments tailored to the needs of different segments of the economy.

**Removing key binding constraints to growth**

The strategy of prioritizing the constraints and handling the *binding constraints* has the advantage of dealing with only a handpicked set of problems first. Instead of wasting efforts on dealing with a thousand issues at a time, the government’s agenda of change supported by the private sector needs to be *focused* on a handful of priority issues.

ACR identified four key areas that currently impede growth through restraining more productive and massive investments in the country. The change agenda that needs to be spearheaded by both public and private sectors includes these four broad policy areas.

**Growth Constraints Removal Agenda**

<table>
<thead>
<tr>
<th>Distortions in Competitive Landscape</th>
<th>Lack of self-discovery</th>
<th>Insufficient quality of human capital</th>
<th>One-dimensional financial system</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Public-Private Change Agenda</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Creating level playing field</td>
<td>Industrial policy</td>
<td>Massive investment in education</td>
<td>Sophistication of financial system</td>
</tr>
</tbody>
</table>

Possible strategic approaches for creating a *fair competitive and transparent environment* are labeled as Blanket approach and Phased approach. The Blanket approach can be implemented as a comprehensive one-off administrative improvement or sequential intervention. The Phased approach discusses 2 options—sector by sector or via building alternative sector.

Armenia’s new industrial policy initiates *self-discovery processes* by engaging key stakeholders from private and public sectors. That aims to reach a shared vision and strategy, as well as coordinated actions through private-public partnership platforms. The goal of the policy is to scale up existing capacities in the mid-term (Horizon 1-2 sectors) and nurture growth potential of emerging high value-added sectors in the long-term perspective (Horizon 3).

The transformation of *higher education* suggests a radically new approach under which education shall become a national idea and a key component of competitive advantage. It is necessary to form a layer of leading institutions that can “translate” and integrate the world’s best educational content with the internal educational system. The strategy can be executed in two possible ways: (1) differentiated approach by focused interventions in creating centers of excellence and scaling up the results throughout the entire system and (2) non-differentiated approach with more balanced and simultaneous advancement in all parts of the system.
A healthy *multidimensional financial system* is critical for economic growth in Armenia to provide for the spectrum of short to long-term debt, equity and quasi-equity instruments. The key strategic options for creating such financial system are:

- deleverage the overleveraged corporate segments through introduction of quasi equity instruments and gradual advancement of capital markets;
- enhancing tailored funding mechanisms for higher-risk companies mainly by scaling up the government/donor-backed schemes, facilitating innovation finance, angel clubs and other mechanisms;
- upgrade the governance and management systems through introduction of quality and excellence standards, massive trainings and business support mechanisms.
INTRODUCTION

The report comes at a time when the value of each percentage point of economic growth in Armenia is of critical importance. Active search for sustainable and high growth paths for Armenia will be a top issue on the national agenda. The pressing need creates a temptation to focus on short-term fixes and temporary boosts of economic activity through traditional fiscal and monetary measures. We should avoid this pitfall and instead understand the fundamental factors that constrain growth. It requires a consistent intellectual effort to uncover structural characteristics of our economic system and view them in the light of growth imperative. The report’s goal is to feed this intellectual effort.

Firstly, the report quantifies the implications of different growth scenarios on socio-economic and demographic metrics. The key challenge here is the ability of the economy to promptly adapt to structural changes driven by productivity increases and ensure the labor force mobility across industries to relieve pressure on employment. Secondly, the report applies growth diagnostic toolsets to uncover the binding constraints on long-term growth. This part is a comprehensive analysis of multiple factors that affect both investment activity and financing options. The analysis reveals four binding constraints to growth. These are the areas where consistent and massive intervention is required to unleash the economy’s potential to grow. Thirdly, the report provides strategic options on how to address and remove these four binding constraints. Consistent with the format of the Armenia Competitiveness Report, these strategic options are not presented in the format of policy recommendations, but rather as strategic focus areas that point out the critical choices that need to be made in both the public and private sectors.
CHAPTER 1: **GROWTH IMPERATIVE**

*Competitiveness requires very high, prolonged growth for Armenia.*

Unemployment, poverty, and emigration are the most critical social challenges for Armenia today. Thus, the economy’s ability to create and sustain comparatively well-paying jobs is the first and foremost test of its competitiveness. Competitiveness rests on the country’s productivity with which it uses its resources.\(^1\) Competitiveness-enhancing productivity applies to each employable person and not only the currently employed. Enhancing productivity requires economic growth, or else it would be at the expense of employment. Therefore, the competitiveness challenge has two constituents: the productivity challenge and the job creation challenge. There is only one possible common solution to achieve these two objectives simultaneously — a sustainable, prolonged high-growth rate.

The identification of drivers and strategies for enhancing productivity is a central issue of competitiveness, while a productivity-centered approach remains just one of the domains of a policy on competitiveness. Nevertheless, growing productivity may result in decreasing employment if everything else is equal.

Thus, policy making in Armenia should be centered on neutralizing the possible trade-off between productivity and employment. Efficient policy should focus on ensuring a rapid response for adapting the economy to accommodate both increasing labor productivity and new job creation. These two domains are fundamental challenges of competitiveness and growth in Armenia.

**Graph 1-1: The Framework of the Study**

*The GDP growth level has a very high stake: even a 0.1% change in the annual growth pace can delay the achievement of key target indicators by one year.*

Competitiveness policy shall aim to reach a state of the economy that is characterized by substantially narrow productivity gap with major competitor countries and provides a job to every employable person with a satisfying compensation eliminating the purely economic motivations to emigrate.

---

In ACR 2013-2014, we call such an economic state the Target State of the Economy (TSE). The TSE model uses accounting identities of demographic and economic variables and simulates the resulting target growth rates. The subsequent pace of economic growth is the minimum growth level required to achieve the desirable or targeted levels of productivity and rate of unemployment in the economy.

As a baseline scenario the target levels of the unemployment rate and annual average productivity growth rate in the TSE model are considered 6% and 5%, respectively. A new interim indicator called “net migration potential” is introduced and defined as the net flows of migration due to economic reasons only, including prosperity level and employment. The net migration potential of the TSE shall be equal to zero. Based on these premises and objectives, the model simulates the number of years required to reach the TSE, which depends on the pace of economic growth.

Graph 1-2 illustrates the logic and key message of the TSE model. If the economy grows at a 9.6% annual growth rate, it can reach the TSE, with 6% unemployment and 0% net migration potential, in 2016. The current annual growth rate of Armenian economy at 3-4% implies reaching the TSE in 2040. The GDP growth level has a very high stake: with a 7% average annual growth rate the TSE can be reached in 10 years, whereas 10% GDP growth can ensure the same results by 2016. Moreover, even a 0.1% change in the pace of growth can shorten the period required for achieving the TSE by one year.

The cost of a prolonged period for reaching the TSE is in migration flow and the deteriorating demography that endangers further economic development and poses security issues for the country.

Graph 1-2: The Output of the TSE Model

Demography and labor productivity are crucial in determining economic growth.

Graph 1-3 summarizes the logic of the TSE model and the relationships among the input and output factors. Economic growth potential is modeled as an output indicator based on demographic indicators and labor productivity.

---

2 Hereinafter in this report the modeled indicator of migration refers to the migration flows due to economic reasons only, including a low prosperity level and high unemployment rate. In reality, the causes for migration in Armenia are diverse and include social justice, geo-political risks, and other non-economic factors.
The deteriorating indicators of natural growth highlight the increasing role of migration flow in balancing the labor market in Armenia.

Population growth

The historical and projected data of the population for Armenia are adjusted by the estimated levels of migration. Consequently, the total change of the population reflects both the natural growth of the population and the flows of emigrants from and immigrants to the country.

Natural growth

Natural growth assumptions are based upon projections of the United Nations Department of Economic and Social Affairs. The five-year period projections are translated into annual forecasts, according to which the natural growth rate will continue deteriorating and decreasing from its current 0.5% to 0.2% in 2020 and to just 0.1% in 2025.

Certain levels of income safeguard a country against the negative balance of migration.

Net migration

Net migration volume assessment is based on the flows of arrivals and departures from the country. According to the State Migration Service of the Armenian Ministry of Territorial Administration, net arrivals to the country were at a negative level of -31,200 in 2013. The chronology of economic development shows that in the pre-crisis period (until 2008) the growing economy resulted in decreasing emigration rates. The trend changed abruptly after the global financial crisis hit the Armenian economy. According to the World Bank, Armenia is among the top economies with the highest emigration rates in the world — average annual net migration flows constituted -3.2% of Armenia’s population for the period of 2008-2012 (as percentage of the population in 2008). Several studies and conducted surveys indicate that the motives for migration have also changed throughout the course of time. Unemployment is still the dominant factor of emigration, but other reasons such as, geopolitical threats, social justice, negative perception towards economic governance and development uncertainty also play a significant role in the decision to leave the country.

---

The analysis of global migration flows shows that in higher-income countries, the negative migration balance is more uncommon. Particularly, in the income group with USD 20,000 GDP per capita and higher, only a few countries (13%) have negative migration flows. At Armenia’s GDP per capita level, there is no distinct pattern of migration — a handful of countries with significant positive migration have the same income level.

The analysis of the unemployment levels and migration flows shows no direct relationship between these two indicators under a certain threshold of unemployment. A distinct pattern is observed in countries with unemployment rates above 13-14% — many of them stand out with negative net migration rates.

**Graph 1-4: Income Levels and Migration in World Economies**

![Graph 1-4: Income Levels and Migration in World Economies](source: World Development Indicators, World Bank (WB WDI)

**Graph 1-5: Unemployment Rates and Migration in World Economies**

![Graph 1-5: Unemployment Rates and Migration in World Economies](source: WB WDI, EV Analysis)
However, the two-factor segmented analysis shows that the probability of net negative migration is only 10% if the country hits 10,000 GDP per capita and 6% unemployment thresholds simultaneously (see Table 1-1). The table validates the results of the TSE model showing that the probability of reversing migration will be quite high if the target indicators outlined in the model above are reached.

### Table 1-1: Migration Statistics by Income Groups and Unemployment Rates of Countries

<table>
<thead>
<tr>
<th>Share of countries with negative migration balance</th>
<th>Unemployment rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&gt;15%</td>
</tr>
<tr>
<td>All countries</td>
<td>76%</td>
</tr>
<tr>
<td>&lt;8,000</td>
<td>86%</td>
</tr>
<tr>
<td>8,000 and up</td>
<td>75%</td>
</tr>
<tr>
<td>10,000 and up</td>
<td>71%</td>
</tr>
<tr>
<td>15,000 and up</td>
<td></td>
</tr>
<tr>
<td>20,000 and up</td>
<td></td>
</tr>
</tbody>
</table>

Source: WB WDI, EV Analysis

**Migration is the main contributor to Armenia’s ageing population.**

**Working-age population**

According to UNFPA assessments Armenia is an ageing nation: the country’s demography is changing in its age structure. In the long term, the working-age population (aged 15-64) share is expected to decrease to 57% in 2100 from the current level of 68-69%. This is a serious demographic change with significant implications for the labor force. In the model, the share of the working-age population is assumed at 65.3% in 2020.

The rapid ageing of Armenia’s population is mainly driven by the migration of its middle-aged segment. Along with other ageing nations, Armenia records a consistent trend of a decreasing net reproduction rate and increasing life expectancy. However, ageing is accelerated by migration, with a heavy dominance of the middle-aged population segment among the migrants.

**The labor market will be affected by an ageing population even if labor force participation remains steady.**

**Labor force**

The labor force participation rate is forecasted to remain at its current estimated level of 66% for the projected 10-year period. With a stable participation rate, however, the labor force will decrease in absolute terms, alongside the decreasing working-age population.

**Six percent of natural or structural unemployment is a feasible target for Armenia.**

**Unemployment rate**

Based on the household survey data, the actual unemployment rate is estimated at around 17% in Armenia. This indicator, together with net migration potential, is the principal factor for simulation in the TSE model. The target unemployment rate is assumed at 6% of the labor force, which is considered unavoidable for any economy and corresponds to the level of structural unemployment in an economy.
Registered productivity growth in Armenia has no straightforward explanations.

Labor productivity

Armenia has shown strong growth rates in productivity since 1993. In the 2000-2006 period only, the average productivity level in the economy increased by 15% annually. Such aggressive performance can be explained by three main factors:

- Real growth in productivity due to the steady upgrade of technologies, management style, and skills.

- The booming construction sector recorded a significant marginal increase in the level of output but did not contribute to proportionate growth in employment. This resulted in growing productivity in the sector, which also increased the country’s average level of productivity.\(^5\)

- The contraction of the non-formal portion of the economy. The informal economy in Armenia mostly refers to unrecorded activities and lowered recorded sales levels. Hiding the number of contracted employees is a less widespread practice in Armenia (many companies register their employees but do not officially record full salaries). Even if the official statistics incorporate some estimates of shadow turnover, there is still considerable unregistered activity. As a result, the expansion of a formal economy caused the officially recorded output per worker to increase.

Graph 1-6: Labor Productivity Dynamics in Armenia, in Billions (AMD), constant prices

![Graph 1-6: Labor Productivity Dynamics in Armenia, in Billions (AMD), constant prices](image)

Source: WB WDI, International Labor Organization (ILO), National Statistical Service of Armenia (NSS)

Further dynamics of productivity performance should follow the convergence logic.

The forecast of labor productivity was carried out on the basis of convergence theories and supporting empirical analysis, revealing a reverse relationship between the level of productivity and its growth rate.

A benchmark analysis was applied to determine the potential level of labor productivity growth in Armenia. The pool of benchmark countries was determined based on prosperity levels comparable to Armenia.

---

\(^5\) Employment underreporting in construction is more widespread; therefore, the official statistics may not completely correspond to reality.
The maximum productivity growth observed in this sample is 5-7% per annum. The TSE model discusses the 5% of productivity growth in Armenia for the coming 10-year period and defines this level as the minimum threshold required for increasing the competitiveness of Armenian producers.

The target of strong growth in productivity is the convergence and shrinking gap of Armenia’s productivity from selected countries. The forecasted dynamics of labor productivity in Armenia is presented below as a benchmark to forecasted productivity levels in Russia and the United States (US). The US is viewed as a global benchmark, whereas the convergence with Russia is essential for Armenia as its main export market where Armenian producers compete.

The annual growth rates of productivity in Russia and the US are forecasted based on their historical dynamics (recent 3 years). If Armenia succeeds in assuring the targeted level of productivity growth in a baseline scenario, it can decrease its current productivity gap from Russia and the US by about 10 percentage points (by 2023).

Graph 1-7: Current Stance and Forecasts of Productivity in Armenia, Russia, and the US

Note: The productivity calculations are based on the current level of productivity in US dollars, PPP adjusted. Source: EV Analysis, WB WDI, ILO, OECD (Organization for Economic Cooperation and Development) Data Lab

Structural shifts are necessary to support productivity growth and convergence within the economy.

Productivity convergence is a set of complex processes in the economy. Without successful transformations and structural adjustments, the net effect of increased productivity will most probably be destroying jobs. The existence of a trade-off between increasing productivity levels and increasing unemployment has been debated for a long time. In the simplest terms, the growth of output per worker means that fewer workers are needed to create the same level of prosperity in the country. If this were true, it would apply huge pressure on policy making as it would mean choosing between protecting jobs (even if low paid and low productive) or enhancing international competitiveness via increased productivity.
However, the historical outlook of global economic performance states that this trade-off exists only in short-term periods. Possible short-term employment losses alternate with long-term growth in both the number of jobs and level of productivity. According to research by the McKinsey Global Institute, the trade-off between growing productivity and a deteriorating labor market has been observed only on an annual basis or in three-year periods.

**Graph 1-8: Productivity and Employment Trends in the US, % in total number of periods**

![Graph 1-8: Productivity and Employment Trends in the US, % in total number of periods](image)

*Note: The method for the calculations in the graph is the following:
- The total number of periods within 1929-2010 is calculated as 1929-1932, 1930-1933, 1931-1934, etc.
- The average dynamics of productivity and employment for each of the periods was assessed.
- The number of periods with the observed trend was calculated; the percent indicates the share of periods with the observed trend in the total number of periods since 1929.*

*Source: McKinsey Global Institute, 2011*

The illustrated trends of increasing productivity and employment can take place as the result of structural changes. The compensation of the eliminated jobs due to increased productivity occurs by creating jobs in new areas. The structural adjustments reflect the migration of labor skills from low-skill to highly productive higher-skilled sectors, and from rural to urban-based industries. The shift from agriculture to low-skill manufacturing and services at the initial stage of productivity growth is typical for every economy.

In this context, the ability of the Armenian economy to sustain productivity growth along with a decreasing unemployment rate depends on the pace of economic adjustment, redeployment of workers with eliminated jobs to new sectors, and the absorption capacity of these new sectors to employ a labor force from lower skill-intensive industries. This requires policies harnessing large-scale investments in non-agricultural sectors to absorb the excessive labor force in the agricultural sector.
INSERT 1: Productivity Convergence

The possible convergence in productivity performance across various economies and sectors has been the subject of intensive academic research and debate. Convergence trends have been studied in several directions:

- **Convergence among productivity levels in different countries**

Different economic schools agree that the level of productivity and its growth have a reverse relation, and productivity levels in various countries tend to converge. Fundamental empirical analysis carried out by different research groups revealed that the convergence tendency was stronger in the post-war period (after the Second World War). Especially valuable research is provided by Abramovitz and Baumol who spotted that in the period of 1870-1979 OECD countries with lower productivity levels recorded higher growth rates and converged in the productivity levels with other OECD countries. When applied to non-OECD countries, the productivity convergence has been weaker but still holds true for the period of 1950-1981.

The recent statistical data supports the continuing logic of convergence in productivity levels worldwide. The world’s average growth rate of productivity comprised ~2.2% in the period of 1991-2012, whereas China, with a starting point quite low, recorded an impressive 8.6% growth rate continually throughout the whole period. China’s gap with the productivity level of the US — as one of the most productive nations — contracted within the same period. China’s productivity level increased from the US’s productivity level from 6% in 1991 to 22% in 2012.

The breakdown of productivity growth dynamics by income levels across economies highlights the discussed trend of convergence for the period of 1992-2012. Low and middle-income economies outpace the growth pace of productivity levels in high-income countries and the world on average.

**Insert Graph 1-1: Growth in GDP Per Person Employed**

![Graph 1-1: Growth in GDP Per Person Employed](source: WB WDI)

- **Convergence among productivity levels of tradable and non-tradable sectors**

Discussions on the existence of a significant and explicable productivity gap between economic sectors first appeared within the theories of economic dualism. On one hand, empirical analysis
came to support the notion of expected productivity advantages of tradable sectors over non-tradable sectors. This is explained by the fact that in tradable sectors, companies compete internationally and have to increase competitiveness (via higher productivity) to gain competitive advantages in the global marketplace. On the other hand, due to growing productivity tradable sectors expand and move to higher sophistication levels that require supporting products and services. As a consequence, demand in the adjacent sectors is triggered and productivity in non-tradable sectors is enhanced as well. This results in productivity level convergence in tradable and non-tradable sectors.

- Convergence among productivity levels of agriculture and other economies as a whole

The breakdown of the economy into two major sectors — agricultural and non-agricultural (industry and services) — is a submodel of dual-economy approaches. Statistical data has consistently confirmed lower productivity in the agricultural sector compared to other sectors in the economy worldwide. However, more recent data (since the 1950s) reveals stronger growth of productivity levels in the agricultural sector compared to non-agricultural sectors. This tendency is preconditioned by two developments: the technological progress penetrating the agricultural sector and boosting labor productivity and the migration of an excessive labor force from the agricultural sector to higher productivity sectors.

Transformation will happen with a certain sequence of logic.

Given the very high stake of GDP growth in Armenia in addressing critical socioeconomic challenges, government policy should focus on aggressive growth. Furthermore, the policy should aim at ensuring deep structural transformations in the economy to support an increase in employment. Such a transformation will follow a certain sequencing logic:

- The tradable sectors will lead the productivity growth pattern driven by international competition. The productivity gain in tradable sectors will pull adjacent service industries through increased secondary demand.
- Productivity gains in tradable sectors will put pressure on adjacent service sectors to increase productivity, which will gradually spread over other non-tradable sectors. The major transmission mechanism will be competition in the labor market since rising productivity will support increasing compensation of labor in tradable sectors, thus putting competitive pressures on non-tradable sectors.
- In case the current trends continue and the government succeeds in promoting export-oriented manufacturing industries, the latter can become a driver of tradable sectors.
- Technology and management system upgrades should play a central role in strategies to increase productivity. This would not necessarily entail massive investments in plants and equipment, but in many cases the adoption of modern ICT and soft management systems.
- The success of this transformation will largely depend on the transformation in agriculture. If it fails to respond with increasing productivity to the mounting pressures from food processing sectors, imports, and competing products in export markets it will have a significant adverse effect on growth and productivity across the economy and thus will turn into a growth bottleneck. The inevitable implications, such as increase in size of farms and land concentration, will result in adverse social outcomes if the employment opportunities created in other sectors are not enough to absorb excess labor in agriculture. This requires fundamental structural shifts, a skills upgrade, and demographic shifts, which will hardly happen without a well-concerted policy set.

7 In 1999-2000 Mitra and Martin used long-term panel data — 1967-1992 — for 50 countries and concluded that “At all levels of development technical progress appears to have been faster in agriculture than in manufacturing. Moreover, there is strong evidence of convergence in levels and growth rates of total factor productivity in agriculture, suggesting relatively rapid international dissemination of innovations.”
CHAPTER 2: ARMENIA’S INVESTMENT GROWTH CONSTRAINTS

2.1 THE PERFORMANCE OF INVESTMENTS

The investment rate in Armenia has been one of the highest among the benchmark countries until recently.

Armenia’s investment rate in GDP has consistently outperformed the selected peer countries since 2006, except for 2012. Furthermore, Armenia recorded one of the highest increases in the level of gross fixed capital formation since 2000. As a result, Armenia has one of the highest average growth levels of GDP among peer countries. 2012 saw tangible decrease in the capital formation in Armenia, driven by low construction activity in the country.

Graph 2-1: Gross Fixed Capital Formation by Country, Share in GDP (%)

Source: WB WDI, NSS, EV Analysis

In line with conventional growth theory, the link between GDP and investment growth in the selected countries weakens at higher levels of investment rates.

Graph 2-2: Growth Performance of GDP and Investments

Note: The size of the bubbles indicates the level of GDP per capita, PPP, in US dollars.


Source: WB WDI, NSS, EV Analysis
**Investments in Armenia have been steadily declining since the peak in 2008.**

Armenia suffered a severe drop in investment volumes in the early 1990s following the collapse of the Soviet Union. In 1992, the level of gross capital formation was just USD21 million against approximately USD1.1 billion in 1990. The investment activity started recovering in the late 1990s, alongside the economic revival. During the 2000s the investment flows intensified, peaking in 2008 at around 40% which is a quite high level by global standards. However, since then it steadily declined approaching 20% which is a quite high level zone.

**Graph 2-3: Dynamics of Investments in Armenia**

![Graph showing the dynamics of investments in Armenia](image)

Source: WB WDI, NSS, EV Analysis

Current transfers and FDI are the main foreign financing sources channeled to Armenia. Year 2009 stands out with the immense increase of government foreign debt, which was the result of anti-crisis funding received by the government. It had a stabilizing effect on investments in light of drastically decreased current transfers and FDI levels.

**Graph 2-4: Key Components of Net Foreign Savings Channeled to Armenia**

![Graph showing key components of net foreign savings](image)

Source: WB WDI, NSS
The continuous growth of FDI inflow to Armenia since 2001 changed to dramatic decrease in 2009.

During 2001-2005, FDI into the Armenian economy recorded high growth rates, although remaining moderate in volumes. In the subsequent three years FDI picked up as the economy showed better prospects for growth. During the crisis years FDI plummeted with economic activity declining significantly. Despite this disruption caused by the economic crisis, an overall increase in FDI was recorded during the decade.

Graph 2-5: GDP Growth Rate and Inward FDI Comparison for Armenia

Investments in infrastructure were the main driver of high FDI growth in the country. The recent decline in FDI shows the exhaustion of this model.

The collective share of energy/utilities, telecom, and transportation sectors in cumulative FDI flows in 2000-2012 was about 58%. The dominating part of FDI has been directed to infrastructure development sectors in Armenia. Together the energy and communications sectors account for ~50% of FDI net stock in Armenia. These are mostly market-seeking FDI in non-tradable sectors with very limited potential for further large FDI attraction.

Graph 2-6: FDI Inflows by Sector, 2000-2012 Cumulative for Armenia, in Millions (USD)

Source: WB WDI, UNCTAD (The United Nations Conference on Trade and Development) Statistics

Source: NSS 2013 (WIR)
In contrast to Armenia, business services, manufacturing and mining sectors top the list of FDI host sectors in transition economies. These sectors represent one of the largest sectors of mobile FDI with high value-added potential. Consequently, Armenia needs to fundamentally revise its FDI strategy.

Armenia’s construction sector, which played a key role in GDP growth, accounted for a substantial share of gross fixed capital formation (GFCF).

GFCF plunged since 2009 with the sharp decline of construction volumes due to the impact of the global economic crisis. However, construction still stands at over 50% of GFCF. The boom in the construction sector was due to rapid growth of residential construction in Yerevan and road construction supported by funding from international donor organizations.
The construction sector was heavily biased towards building non-productive capacities, which doesn’t contribute to growth acceleration.

Residential construction accounted for over 53% on average of the total construction activities in the country for the period of 2006-2008 (41% in 2006-2012). By comparison, the share of residential construction in total was much lower in Estonia, Moldova, and Hungary, accounting for only 15%, 27%, and 10%, respectively (cumulative for 2008-2011).

The large share of residential components imply that a significant portion of investments is not expected to reproduce the productive capacities in the economy and thus contribute to future economic growth.

Graph 2.9: The Structure of Construction Activities by Economic Sector, Share in Total Activities (%), Cumulative 2006-2012

Note: The Real estate activities refer to residential construction. 
Source: NSS

The energy and mining sectors, with the aid of foreign capital, drove the biggest investment projects.

As of 2011 the private sector contributed to over 80% of the GFCF in Armenia (25% of GDP). For a better understanding of corporate sector investments, we carried out a survey of local companies with a focus on capital expenditures. The survey sample included 75 companies of different sizes from the most capital-intensive sectors of the economy.

The average annual investment volume by the corporate sector according to the survey results was around USD 350-400 million. The most capex-intensive sectors were mining and energy, which carried out the most voluminous investments.

The companies with foreign investments play a distinct role in total investment behavior and hold the major share in total estimated investments: roughly 60% of the reported investments were carried out by companies with some form of international capital. The few large-scale infrastructure and mining projects take up the major share in total volume of investments. However, most of the investments are small scale.

8 National statistical departments of the observed countries.
9 Fifty-five companies represent the industry sector and account for approximately 70% of the industrial value added in the economy.
**The growth outlook of companies is positive, indicating the potential of investment absorption in Armenia.**

Despite the economic uncertainty, the overall growth sentiment is quite positive in Armenia. The summary of the survey results shows that total sales growth can average at 14% in the short term.

Although the surveyed companies mentioned being severely constrained by limited market opportunities, they plan to fulfill their growth potential mainly by expanding production capacities.

**Graph 2-11: Sources of Possible Growth**

The current level of capacity utilization is moderately high (70% on average), indicating the future need for capital expenses if a significant expansion takes place. A significant number of companies claim to have plans to expand in new markets and products, which shows the investment dynamism as well as potentially additional demand in production capacities and, consequently, investment funding.
Overall, 80% of the surveyed companies reported that they have investment projects in the pipeline with volume totaling USD 500-900 million. Companies with international capital have significant participation, accounting for ~40% of planned investments. This means that FDI (mostly non-greenfield FDI) will continue to be an important source of investments in Armenia. With available affordable financing, the additional absorption capacity comprises approximately USD 500 million, according to the survey.

The corporate sector in Armenia is “short sighted.”

Long-term planning is not a widespread management tool employed at companies, mainly due to the highly perceived risk of the economy and susceptibility to volatilities. As a consequence, about one-fifth of the companies do not have any investment plans for the near future. Corporate sector investment plans are one to three years long at most with expectations of quick returns, which has its implications on the funding structure of companies as well.

Source: EV Consulting Survey, 2013
2.2 INVESTMENT GROWTH CONSTRAINTS

The impressive performance in investments up until 2008 ranked Armenia among the countries with the highest growth in capital formation. However, as investments were not dominantly injected in productive capital, they will have a limited role in creating a sound base for sustainable high growth potential in the future. This became explicit in post-crisis period through not only sharp economic decline, but also declining share of investments in GDP.

Armenia’s struggle with the challenge of sustaining very high growth rates for a long period of time will become one of sustaining high investment rates into highly productive capital. The latter requires identifying and removing all key constraints to investment growth. This is not a trivial task given the interplay of multiple factors that may potentially affect investment performance and economic growth. Similar systemic problem sets are usually tackled by the prioritization of key constraints that function as bottlenecks. One such approach that has been widely adopted is the so-called Growth Diagnostics tools developed and propagated by Hausmann, Rodrik, and Velasco.10 The framework labels such bottlenecks as “binding constraints” and provides a comprehensive approach to identify them. A vivid real-life analogy is water being a man’s binding constraint in a desert.11 Unless you remove those constraints your efforts addressing other factors will become less effective. The binding constraints analysis acknowledges that each country may have its own unique set of constraints due to different circumstances. This calls for finding country-specific constraining factors and policy measures. The latter requires prioritization—governments are resource-constrained and there is little usefulness when everything is short of the desired ambition. Growth strategies require focus and prioritization.

The underlying assumption of the growth model discussed by Hausmann et al. is that “in a balanced growth path, the rate at which the economy grows (which equals the rate at which assets are accumulated) is a function of the difference between the expected return to asset accumulation and the cost of those assets as seen by the private agents which are accumulating those assets.” Furthermore, the growth model classifies the growth constraints in two major domains — those that lead to low expected returns or those that increase the cost of funding. The growth analytics then construct a decision tree by decomposing the two potential scenarios of low growth into more detailed micro-level constraints.

Graph 2-14: Growth Diagnostics Framework


For insight on possible growth constraints we conducted a survey among local businesses. According to them, the limited domestic market and lack of a highly qualified workforce are the major growth constraints. Customs and tax administration as well as limited access to affordable finance also restrain the companies’ readiness to invest in their future growth.

Graph 2-15: Major Impediments to Growth

Source: EV Consulting Survey, 2013

These perceptions were juxtaposed with the findings of the Growth Diagnostics toolset to check the robustness of the conclusions. The analysis of Armenia’s growth constraints using the Growth Diagnostics tool is described below.
2.3 SOCIAL RETURNS

Social returns to investments (meaning returns accruing both to private agents and society at large) in a country depend upon the quality of the factors of production and supporting infrastructure. The discussion of the level of social returns starts with the assessment of human capital in Armenia and covers entrepreneurial assets/managerial capacities, physical infrastructure, and information and communications technology (ICT) infrastructure.

*Armenia does not have a shortage of higher educated people; however, the supply of quality human resources is among the binding constraints for economic growth.*

Over half of the population (of corresponding age groups) in Armenia has completed tertiary education. Armenia outranks countries of even higher income groups with this indicator.

**Graph 2-16: Tertiary Enrollment and Income Levels, 2011**

Armenia is ranked 51st among 142 countries by level of enrollment in the tertiary system, which is quite a favorable position. Armenia’s ranking in secondary enrollment is also quite competitive in the global landscape, whereas net primary enrollment was just 87% as of 2011. This level can be explained by several factors:

- Changes in the Armenian educational system and the shift from 10-year to 12-year schooling. For instance, the indicator of primary gross enrollment fell from 103% in 2010 to 84% in 2011. Such an abrupt change can be a result of a systemic rather than demographic change.¹²
- The flaws in the total population statistics in Armenia that may distort the ratio

¹² Primary gross enrollment is defined as the total enrollment in primary education, regardless of age, expressed as a percentage of the population of the official primary education age. As a result of the reform the definition of the primary school education age changed with the inclusion of younger children (now pupils enter school at five years of age instead of seven). This extended the population base of the official primary education age and lowered the enrollment rate.
Table 2-1: GCR Rankings by Enrollment in the Educational System, 2013-2014

<table>
<thead>
<tr>
<th>Rank by Primary Education Enrollment</th>
<th>Rank by Secondary Education Enrollment</th>
<th>Rank by Tertiary Education Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Armenia</td>
<td>115</td>
<td>61</td>
</tr>
<tr>
<td>Armenia</td>
<td>117</td>
<td>39</td>
</tr>
<tr>
<td>Estonia</td>
<td>64</td>
<td>19</td>
</tr>
<tr>
<td>Georgia</td>
<td>32</td>
<td>80</td>
</tr>
<tr>
<td>Israel</td>
<td>45</td>
<td>28</td>
</tr>
<tr>
<td>Romania</td>
<td>112</td>
<td>46</td>
</tr>
<tr>
<td>Russian Federation</td>
<td>79</td>
<td>75</td>
</tr>
<tr>
<td>Slovak Republic</td>
<td>41</td>
<td>64</td>
</tr>
<tr>
<td>Ukraine</td>
<td>94</td>
<td>54</td>
</tr>
<tr>
<td>United States</td>
<td>66</td>
<td>49</td>
</tr>
</tbody>
</table>


The population share with higher education is high in Armenia, at over 50%. The structure of unemployment by education level resembles that of the labor force: about 25% of the labor force is highly educated and approximately 27% of the unemployed has tertiary education.

The number of unemployed with higher education in Armenia is close to the global average of 19%. However, the spread of the indicator across countries is large and varies from 0.2% in Thailand to around 50% in the US, Singapore, and Belarus.

Furthermore, Armenia is distinguished with a more striking phenomenon—a high share of highly educated people who are not included in the labor force. This is a consequence of the “formal nature” of education. The use of a higher education diploma as sole evidence of a certain social status is quite widespread in the country. As a result, the “voluntary component” prevails in the reasoning of why graduates with tertiary education do not work. According to the Student Tracer Study conducted by EV Consulting, around half of the graduates who have never worked cited personal choice driven by personal reasons, lack of willingness, or time as excuses. This sentiment prevails particularly among graduates in social sciences (sociology, psychology, and philosophy).

Consequently, the economy invests in unproductive capital—a highly educated workforce that initially does not intend to use the acquired education for producing goods and services.

The “real unemployment” (lack of employment opportunities due to qualification, limited work experience, or low salaries) in its turn is more prevalent among graduates of pedagogical studies, culture, and sports.

The relatively low level of return on education in Armenia also indicates that the schooling factor is not constraint.

Return on education refers to the rate of income growth generated on average in the economy where one level of higher education is obtained.

The insignificant return on education proves that in quantitative terms, mere lack of education does not create significant distortions between the demand and supply in the labor market. Income levels are even less sensitive to the transition from secondary to tertiary education levels, which is naturally higher in countries having a higher share of knowledge-intensive sectors in total output. Thus, in Hungary, the US, and Israel professionals with tertiary education earn over 60% more on average than employees with secondary education.

13 GCR 2013-2014 rankings are among 148 countries.
14 Student Tracer Study by EV Consulting, survey of graduates, 2011.
An employee that receives additional schooling in Armenia earns on average 4,000 AMD more per month. This is about 5.5% of the average salary across the economy. The return per additional schooling year is insignificant, especially within the secondary schooling system generating just 2% in additional earnings for employees.

15 International Standard Classification of Education
According to a survey of graduates, about 70% of graduates in agrarian sciences and 50% of medical graduates do not work in their fields of specialization. The average rate of divergence between work and field of study is about 30% for major specializations.16

Source: NSS Household Survey, EV analysis

Graph 2-20: Relevance of First Job with Expertise, by Profession

Source: Student Tracer Study by EV Consulting, survey of graduates, 2011.

16 Student Tracer Study by EV Consulting, survey of graduates, 2011.
The root cause of workforce issues lies in quality.

Concerns over workforce quality and inadequate educational levels of graduates are widely discussed by local business owners and executives. According to a survey of employers, 90% of company executives agree that the current state of the professional workforce may hinder the expansion of their sectors.

The predominant belief is that graduates are, in general, unprepared to work in their fields of study as they have low levels of both theoretical and practical knowledge and skills. Thus, there is a significant gap between the level of sophistication of the educational system and the actual needs of the economy.

Graph 2-21: Evaluation of Quality of Graduates in Armenia by Employers

Source: Employer Survey, EV Consulting, 2011

In addition, a recent survey of companies on growth constraints revealed that the lack of a highly qualified labor force is the second most important constraint for their expansion. This factor accounted for 15% of responses following “limited market size” with 20% of responses.

According to Global Competitiveness Report (GCR) rankings, Armenia’s positions in the performance of the primary and overall educational system are not particularly unfavorable. However, several indicators of higher education and training (such as quality of management schools, availability of research and training services, and extent of staff training) stand out with their strikingly uncompetitive rankings. These indicators are good signs of the Armenian educational system’s vulnerable areas, which are responsible for the low quality of education and undermine the supply of a qualified workforce to the industry.

---

18 The survey was conducted among executives and HR managers of 25 leading Armenian companies, representing different sectors of the economy.
19 Survey on Growth Constraints, EV Consulting, 2013; sample size – 48 local companies.
Table 2-2: GCR Rankings on Quality of Education in Armenia and Other Countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Rank by Quality of Primary Education</th>
<th>Rank by Quality of Educational System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estonia</td>
<td>18</td>
<td>47</td>
</tr>
<tr>
<td>United States</td>
<td>41</td>
<td>25</td>
</tr>
<tr>
<td>Israel</td>
<td>71</td>
<td>56</td>
</tr>
<tr>
<td>Ukraine</td>
<td>37</td>
<td>79</td>
</tr>
<tr>
<td>Russian Federation</td>
<td>61</td>
<td>85</td>
</tr>
<tr>
<td>Slovak Republic</td>
<td>54</td>
<td>130</td>
</tr>
<tr>
<td>Romania</td>
<td>85</td>
<td>99</td>
</tr>
<tr>
<td>Armenia</td>
<td>77</td>
<td>69</td>
</tr>
<tr>
<td>Georgia</td>
<td>94</td>
<td>105</td>
</tr>
<tr>
<td>Azerbaijan</td>
<td>111</td>
<td>114</td>
</tr>
</tbody>
</table>

Source: WEF GCR 2013-2014

Table 2-3: Components of Higher Education and Training in Armenia, GCR Rankings

<table>
<thead>
<tr>
<th>Component</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality of math and science education</td>
<td>67</td>
</tr>
<tr>
<td>Quality of management schools</td>
<td>120</td>
</tr>
<tr>
<td>Internet access in schools</td>
<td>78</td>
</tr>
<tr>
<td>Availability of research and training services</td>
<td>119</td>
</tr>
<tr>
<td>Extent of staff training</td>
<td>114</td>
</tr>
</tbody>
</table>

Source: WEF GCR 2013-2014

A very low level of investment in education in Armenia can explain the paradox of a high enrollment rate and low quality of education. Thus, on the global map of education, investments, and enrollment in the higher educational system, Armenia stands out with one of the lowest levels of expenditures per student in tertiary education.

Graph 2-22: Tertiary Enrollment and Expenditure per Student, 2011

Source: WB WDI
Note: Due to the lack of information, the data for several countries is for 2011.
The mentioned benchmark analysis shows that the quality of education, which leads to low human capital, is a binding growth constraint. The National Competitiveness Report of Armenia 2010\textsuperscript{20} elaborated a thorough mapping of underlying factors and grouped the root causes for the current quality of higher education into the following categories: prevailing social values, underdeveloped learning elements, low leadership capacities, insufficient competition in the education sector to foster quality improvement, and a nascent level of the internationalization of the education system. Furthermore, the causal relationship between quality of education and low growth is two-sided. An insufficient workforce does not foster industrial growth, which consequently does not expand investment in education. Yet, low investments and low sophistication of demand towards educational services do not lead to the improvement of Armenia’s educational system. As a consequence, the equilibrium is set low. The key to overcoming this particular binding constraint can be the holistic approach addressed at both the demand and supply sides of the labor market.

\textit{Relatively weak management in local companies serves as a growth constraint for the economy as a whole.}

A comprehensive study of management practices at Armenian companies identified significant deviations from global best practice.\textsuperscript{21} The study, based on the World Management Survey methodology, carried out by EV Consulting at approximately 50 manufacturing companies assessed operational, target, and talent management practices. Armenia lags behind the benchmarked 21 countries with an average score of 2.46 compared with the global average level of 2.99. Its divergences from best practices are larger in operations and target management but substantially less in talent management.

Management improvement provides a high return on investment. Studies on management evaluation conducted in 21 countries showed that an improvement by 1 point in the management score results in a 6% increase in productivity, 2.3% increase in sales growth, and 2.8% in return on capital employed.\textsuperscript{22}

Further benefits of higher management sophistication include lower assessed risk levels of companies, and subsequently, lower interest rates for bank loans or other financial instruments.

Structural factors such as small company size, family owned and managed firms, shortcomings in managerial skills, imperfect competition, and a weaker presence of multinational corporations (MNCs) in Armenia all contribute to the underperformance of Armenian firms on a global level. However, most causal factors are internal and include the significant need for improvement in operations, performance management areas, management reporting, corporate governance, and long-term strategy and execution practices. The lack of a clear division between ownership and management of companies significantly contributes to the low management sophistication and transparency levels in companies.

The relevant rankings of the Global Competitiveness Report reinforce this constraint.

\begin{footnotesize}
\begin{enumerate}
\item London School of Economics, Centre for Economic Performance, 2011.
\end{enumerate}
\end{footnotesize}
Table 2-4: GCR Rankings on Management Capacities

<table>
<thead>
<tr>
<th></th>
<th>Estonia</th>
<th>Poland</th>
<th>Albania</th>
<th>Armenia</th>
<th>Georgia</th>
<th>Moldova</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethical behavior of firms</td>
<td>35</td>
<td>59</td>
<td>129</td>
<td>81</td>
<td>67</td>
<td>119</td>
</tr>
<tr>
<td>Strength of auditing and reporting standards</td>
<td>26</td>
<td>49</td>
<td>123</td>
<td>87</td>
<td>89</td>
<td>102</td>
</tr>
<tr>
<td>Efficacy of corporate boards</td>
<td>36</td>
<td>95</td>
<td>89</td>
<td>96</td>
<td>109</td>
<td>101</td>
</tr>
<tr>
<td>Protection of minority shareholders’ interests</td>
<td>64</td>
<td>93</td>
<td>95</td>
<td>100</td>
<td>125</td>
<td>118</td>
</tr>
<tr>
<td>Production process sophistication</td>
<td>53</td>
<td>51</td>
<td>73</td>
<td>92</td>
<td>119</td>
<td>125</td>
</tr>
<tr>
<td>Willingness to delegate authority</td>
<td>29</td>
<td>68</td>
<td>71</td>
<td>115</td>
<td>127</td>
<td>108</td>
</tr>
<tr>
<td>Quality of management schools</td>
<td>54</td>
<td>89</td>
<td>84</td>
<td>120</td>
<td>107</td>
<td>133</td>
</tr>
<tr>
<td>Reliance on professional management</td>
<td>26</td>
<td>79</td>
<td>95</td>
<td>96</td>
<td>82</td>
<td>111</td>
</tr>
</tbody>
</table>

Source: WEF GCR 2013-2014

The unfavorable ranking on the reliance on professional management is a reflection of a widespread lack of quality managers in Armenia, an issue widely discussed by local businesses. But a more fundamental causal factor is the poor division between ownership and management of companies. Most major local corporations are still family owned businesses or parts of business groups run by different family members. Lack of trust and corporate governance principles signal fundamental deficiencies in entrepreneurial culture and capacities in the country.

Despite significant flaws, general infrastructure is not a binding constraint.

Investments in infrastructure development projects have been high in Armenia, driven particularly by international development and private funding. As a result, the internal infrastructure has improved drastically. Recent notable developments include the complete renovation of the airport and internal road improvements.

Armenia’s rankings are at mid level on a comparative scale and are slightly higher than the overall country ranking, indicating that infrastructure might not be a binding constraint to growth. Indicators of internet and mobile usage and penetration made a breakthrough progress in 2013. Overall, the pillar of Technological readiness improved its position by 20 points. The biggest positive shifts were spotted in the number of individuals using internet and international internet bandwidth, which as a result became one of the competitive advantages of Armenian economy.
The information technologies (IT) and communication services sector stands out with its accelerating growth and investment attraction.

Armenia’s IT sector was formed based on the pool of highly qualified professionals. A number of foreign IT companies opened branches in Armenia during the 1990s, but the proliferation of branches of MNCs started in the mid 2000s to tap the comparably low cost talent of Armenian engineers. The increasing foreign presence in the IT industry boosted the transfer of technology to the local industry: Armenia ranks 50th in the effect of FDI on technology transfer, according to WEF. However, the IT industry remained somewhat disconnected from the rest of the economy, limiting the adoption of new ICT tools by local businesses. The outstandingly unfavorable rankings prove the low connectedness: in company spending on R&D, university-industry collaboration in R&D, and government procurement of advanced technological products, Armenia is ranked 109th, 107th, and 111th, respectively. Simultaneously, Armenia is quite competitive by a few subpillars of technological readiness and can capitalize on these factors to enhance the local technology industry. The communications infrastructure received a real boost in recent years with the penetration of computers, the internet, and mobile phones. With increasing coverage, updated technical specifications, and decreasing prices, internet access in Armenia has significantly improved.
After a surge in accessibility and affordability indicators, the IT sector undertook fundamental qualitative transformations. A number of recent ongoing projects or planned initiatives aim to enhance the science infrastructure, foster an entrepreneurial culture in the IT sector, and, most importantly, produce a highly qualified internationally competitive workforce in the IT sector.

Table 2-5: Armenia’s Rankings in Technological Readiness in GCR

| Availability of latest technologies | 97 |
| Firm-level technology absorption    | 98 |
| FDI and technology transfer        | 50 |
| Individuals using internet          | 84 |
| Broadband internet subscriptions    | 74 |
| Int’l internet bandwidth            | 47 |
| Mobile broadband subscriptions      | 57 |

*Source: WEF GCR 2013-2014*

Transportation limitations have a negative effect on Armenia’s economic performance; however, it is difficult to state the size of its impact as a constraint to growth.

With no access to the sea and closed borders with two of its neighbors, the transportation infrastructure is naturally non-conducive. Rail transport is used for mining exports and other resource-based products. Road transport is the major route for exports of other products. High value-added and low-weight commodities are transported out of the country by air.

Graph 2-26: Armenia’s Foreign Trade by Means of Transportation, 2012

Source: Customs Service of the Republic of Armenia

Armenia’s exports to Russia, its main trading partner, are mostly sent by land. The inland transportation route from Yerevan to Moscow crosses the Upper Lars customs point in Georgia. Its service is not stable and is often closed in winter. The rate for the transportation of one truckload of commodities from Yerevan to Moscow is around USD 4,000-4,500. By comparison, Moldova, a comparator country for Armenia in terms of its exports to Russia, transports its goods at USD 3,000-3,500 per truck on average (from Kishinev to Moscow).

Sea transportation, as an alternative to the land transportation, is more costly for Armenian exporters, due to the lack of own port infrastructure.
Table 2-6: Benchmark of Costs to Export, per 20 Tons (in USD)

<table>
<thead>
<tr>
<th>Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yerevan-Moscow (land transportation through Lars)</td>
</tr>
<tr>
<td>Yerevan-Moscow (sea transportation through Poti and Illichevsk ports)</td>
</tr>
<tr>
<td>Kishinev-Moscow (land transportation)</td>
</tr>
</tbody>
</table>

*Source: Interviews with transport service companies of Armenia and Moldova, 2013*

The strength of transportation constraints varies from one commodity group to another. Thus, transportation costs are negligible in high-value products, such as brandy and copper, whereas they hold a significant share in wine and fruit exports.

Table 2-7: Average Transport Costs in the Wholesale Export Price of Selected Export Commodities

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Export destinations</th>
<th>Share of transport costs in the wholesale export price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textile</td>
<td>Canada</td>
<td>7-9%</td>
</tr>
<tr>
<td>Wine</td>
<td>Russia</td>
<td>15-17%</td>
</tr>
<tr>
<td>Fruits</td>
<td>Russia</td>
<td>27-29%</td>
</tr>
<tr>
<td>Brandy</td>
<td>Russia</td>
<td>4-6%</td>
</tr>
<tr>
<td>Copper</td>
<td>Germany</td>
<td>3-5%</td>
</tr>
</tbody>
</table>

*Source: Interviews with exporters, 2013*

The share of transportation costs in total commodity costs is determined by the ratio of weight and value of the exported commodity. The higher the weight-to-value ratio of a product, the heavier it is per unit of price and the more its transportation costs will be for exports. The benchmark of this indicator for a few countries can serve as a test of the existence of transport constraints for exports.

The ratio for Armenia has been benchmarked with those countries that have the most diversified exports and where transportation is not a binding constraint. The benchmarking did not reveal any convincing pattern.

Graph 2-27: Weight-to-Value Ratio for Exports, 2011

*Measures the weight of 1 USD exported commodity in kg*

Source: UN Comtrade database, EV analysis

Further analysis of the weight-to-value ratios within the export structure of Armenia shows that the top exported commodities have a lower weight-to-value ratio (compared with the export basket average). This pattern is driven by the fact that high value-added natural minerals and diamonds dominate Armenian exports, and transportation costs comprise a negligible share in the total costs of these commodities.
Despite significant price disadvantages, local businessmen do not classify road quality and air transport infrastructure among the biggest issues, according to the WEF. Armenia’s lack of its own port infrastructure is one of its weakest competitive areas. The infrastructure quality of Georgia’s port of Poti, which serves exports from both Georgia and Armenia, was ranked 68th by Georgian businessmen and 122nd by Armenian exporters. This is conditioned by the transportation costs to the port and the inconsistency and instability of transportation services Armenian exporters face in Poti.

Armenia is 100th among 155 countries in the World Bank’s overall logistics index. However, the benchmark analysis shows that a large number of countries with similar or even worse rankings in the Logistics Performance Index score much better in their export performances.

Generally, although transportation costs and reliability factors put Armenia at a significant competitive disadvantage, there is no convincing evidence that transportation infrastructure acts as a binding constraint for economic growth in this phase.
2.4 APPROPRIABILITY

GOVERNMENT FAILURES

Government failures in managing micro risks are critical constraints.

Despite notable improvements in Armenia’s institutional capacities, the risks associated with deficiencies in the microeconomic business environment are quite high. The most troublesome factors that evidently lead to government failures in managing micro risks are unfair and burdensome tax and customs administration, weak market competition regulation, insufficient level of judicial independence, and protection of minority shareholders’ interests. These deficiencies are vividly reflected in international rankings such as GCR and the World Bank’s Doing Business.

Graph 2-30: Micro-level Constraints, Rank in GCR

<table>
<thead>
<tr>
<th>Factor</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business costs of crime and violence</td>
<td>20</td>
</tr>
<tr>
<td>Burden of government regulation</td>
<td>34</td>
</tr>
<tr>
<td>Business costs of terrorism</td>
<td>38</td>
</tr>
<tr>
<td>Property rights</td>
<td>54</td>
</tr>
<tr>
<td>Organized crime</td>
<td>57</td>
</tr>
<tr>
<td>Favoritism in decisions of government officials</td>
<td>68</td>
</tr>
<tr>
<td>Efficiency of legal framework in settling disputes</td>
<td>74</td>
</tr>
<tr>
<td>Intellectual property protection</td>
<td>75</td>
</tr>
<tr>
<td>Irregular payments and bribes</td>
<td>75</td>
</tr>
<tr>
<td>Extent of market dominance</td>
<td>75</td>
</tr>
<tr>
<td>Efficiency of legal framework in challenging regs.</td>
<td>76</td>
</tr>
<tr>
<td>Reliability of police services</td>
<td>76</td>
</tr>
<tr>
<td>Business impact of rules on FDI</td>
<td>94</td>
</tr>
<tr>
<td>Effectiveness of anti-monopoly policy</td>
<td>97</td>
</tr>
<tr>
<td>Protection of minority shareholders’ interests</td>
<td>100</td>
</tr>
<tr>
<td>Judicial independence</td>
<td>110</td>
</tr>
</tbody>
</table>

Note: The highlighted factors recorded weaker performance compared with the overall competitiveness performance of the country (ranked 79th).

Source: WEF GCR 2013-2014
Table 2-8: Armenia’s Rank in World Bank’s Doing Business

<table>
<thead>
<tr>
<th>Activity</th>
<th>DB 2014 Rank</th>
<th>DB 2013 Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Starting a Business</td>
<td>6</td>
<td>10</td>
</tr>
<tr>
<td>Dealing with Construction Permits</td>
<td>79</td>
<td>71</td>
</tr>
<tr>
<td>Getting Electricity</td>
<td>109</td>
<td>107</td>
</tr>
<tr>
<td>Registering Property</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Getting Credit</td>
<td>42</td>
<td>40</td>
</tr>
<tr>
<td>Protecting Investors</td>
<td>22</td>
<td>21</td>
</tr>
<tr>
<td>Paying Taxes</td>
<td>103</td>
<td>112</td>
</tr>
<tr>
<td>Trading Across Borders</td>
<td>117</td>
<td>116</td>
</tr>
<tr>
<td>Enforcing Contracts</td>
<td>112</td>
<td>117</td>
</tr>
<tr>
<td>Resolving Insolvency</td>
<td>76</td>
<td>76</td>
</tr>
</tbody>
</table>

Source: WB Doing Business (DB)

Unfair competition acts as a powerful economic signal holding back business growth and entrepreneurship in Armenia.

The public discourse is heavily shifted towards considering the dominance of monopolies as the key constraint in Armenia. However, this diagnostics provides an incomplete view of the economy-wide competition stance. In its recent publication, WB cites the results of EBRD BEEPS (Business Environment and Enterprise Performance Survey) 2009, which show that the number of sectors with monopolies and considerable concentration levels in Armenia is the highest among observed countries. A deeper look reveals that the majority of the monopolies are in sectors related to infrastructure. It is true that in a number of comparable countries, the number of companies operating in infrastructure sectors is higher than in Armenia. However, the above analysis on infrastructural issues of Armenia points that infrastructure is not a binding constraint for the economic growth of the country.

Graph 2-31: Number of Firms in Each Sector, Market, or Market Segment


The sectoral view of the economy does not allow asserting about the widespread prevalence of monopolies/oligopolies in GDP-creating sectors, as those are mainly concentrated in the import of various commodity products. A wider look allows spotting most problematic issues in cross-sectoral concentration rather than within sector concentration. The power created in imports of certain massively consumed commodities enables the formation of powerful business groups with a multitude of sectors and companies involved under one umbrella.

Business groups are a thriving form of economic structure in Armenia. This form allows for bypassing the available growth constraints in the economy and filling the “institutional voids.”

Table 2-9 provides an overview of market dominance in key import commodity groups.

Table 2-9: List of Imported Products Where Dominant Market Players Exist, as of 02/27/2013

<table>
<thead>
<tr>
<th>Imported product</th>
<th>Share of the major player in imports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chicken</td>
<td>77.6%</td>
</tr>
<tr>
<td>Sugar</td>
<td>99%</td>
</tr>
<tr>
<td>Ethyl alcohol</td>
<td>100%</td>
</tr>
<tr>
<td>Butter</td>
<td>35.4%</td>
</tr>
<tr>
<td>Oil (except for olive oil)</td>
<td>37.5%</td>
</tr>
<tr>
<td>Rice</td>
<td>33.6%</td>
</tr>
<tr>
<td>Infant foods</td>
<td>60%</td>
</tr>
<tr>
<td>Flour – major market player 1</td>
<td>47.3%</td>
</tr>
<tr>
<td>Flour – major market player 2</td>
<td>34.4%</td>
</tr>
<tr>
<td>Bananas</td>
<td>51%</td>
</tr>
<tr>
<td>Fuel – major market player 1</td>
<td>42.6%</td>
</tr>
<tr>
<td>Fuel – major market player 2</td>
<td>41.7%</td>
</tr>
<tr>
<td>Chocolate bars*</td>
<td>92.1%</td>
</tr>
</tbody>
</table>

*The competition in other types of chocolate products (candy, etc.) is more intense and involves both a local producer and importers.

Source: State Commission for the Protection of Economic Competition of the Republic of Armenia

The total share of the products listed in Table 2-9 is about 14% in Armenia’s total imports, while the share of food products listed in total food imports of the country is about 24%.

The dominant market position in imports provides a sound source of steady cash flows, which the business groups generally use for diversifying into other businesses. This ultimately results in the creation of power business groups comprised of companies linked together through one core business and an owner. The core lucrative business allows cross subsidization, exertion of buyer and supplier power, political clout with due consequences on transparency, tax and other state administration advantages, and so forth. The business groups also take advantage of pure economic mechanisms such as economies of scope due to a wider range of activities and lower portfolio risk.

The operational mechanism of the power business groups reinforces itself and the concentration of wealth increases. The resources generally flow to mostly serve local markets, which are limited by definition, and hence the phenomena of intensifying competition is apparent, with an increasing concentration within the industry as small players are marginalized. Power is leveraged across other sectors within the business groups, creating uneven grounds for the businesses.

24 2011; UN Comtrade, NSS.
Another major source of unfair competition is the state procurement system, according to enterprise survey. Many businesses claim that corruption, kickbacks, and favoritism are quite widespread in public tenders. However, according to WEF rankings, Armenia improved its position by favoritism in decisions of government officials from previous 75th to 68th rank which is a comparably good scaling.

Yet, according to the prevailing opinion among local businesses, the discriminating and burdensome tax and customs administration is probably the biggest source of a distorted competitive environment and microeconomic risks for businesses. Problems include the arbitrary setting of invoice values for customs clearance, excessive and sometimes selectively discriminating bureaucracy at customs, discriminating tax inspections and treatment, and arbitrary enforcement of the tax law.

The shadow economy creates multilayered negative externalities on company and country levels.

Limiting the state budget revenues is the most discussed negative effect of the shadow economy. The most critical company-level effects are:
- The discouragement from having quality management systems and, particularly, reliable management reporting.
- Lack of corporate governance.
- An increase in risk levels from the viewpoint of financial institutions and, ultimately, an increase in the risk premiums charged for financing.

Decreasing the shadow segment of the economy is a priority on the government’s agenda. However, it is a battle in darkness; there are no even, reliable estimates of the shadow’s present extent. The most recent estimate was made in 2008 and is not relevant today.

Apparently, the underlying reasons for the large shadow segment are not high tax rates. The total tax rate stands at 38.8% of profit for Armenian companies, which is lower compared with average levels of taxation in OECD and Eastern European and Central Asian countries—41.3% and 39.7%, respectively. Georgia has only 16.4% of total tax rate, which creates strong competition for Armenia on a regional level. However, the tax rate only is hardly a convincing argument for the existence of widespread tax evasion.

Graph 2-32: Doing Business Rankings on Paying Taxes

<table>
<thead>
<tr>
<th>Country</th>
<th>Total tax rate (% profit)</th>
<th>Paying taxes rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Georgia</td>
<td>16.4</td>
<td>29</td>
</tr>
<tr>
<td>Estonia</td>
<td>32</td>
<td>49.4</td>
</tr>
<tr>
<td>Azerbaijan</td>
<td>40</td>
<td>77</td>
</tr>
<tr>
<td>Moldova</td>
<td>40.4</td>
<td>95</td>
</tr>
<tr>
<td>Armenia</td>
<td>38.8</td>
<td>103</td>
</tr>
<tr>
<td>Poland</td>
<td>41.6</td>
<td>113</td>
</tr>
<tr>
<td>Belarus</td>
<td>54</td>
<td>133</td>
</tr>
<tr>
<td>Albania</td>
<td>31.7</td>
<td>146</td>
</tr>
<tr>
<td>OECD high income</td>
<td>41.3</td>
<td></td>
</tr>
<tr>
<td>Eastern Europe &amp; Central Asia</td>
<td>39.7</td>
<td></td>
</tr>
</tbody>
</table>

Source: WB DB 2014
Informal employment is one of the forms of shadow practices. Another popular form is the partial reporting of employee salaries. This is a milder form compared with informal employment, but according to expert estimates it has a wider spread. In the compared pool of countries Armenia’s informal employment is among the highest.

**Graph 2-33: Share of Informal Employment in Benchmark Countries**

![Graph showing the share of informal employment in benchmark countries.](image)

*The number of persons in informal employment outside the informal sector is not assessed for Russia, Ukraine, and Kyrgyzstan. Thus, the total indicator of informal employment may be higher in these countries than presented in the graph above.*

Tax evasion is rooted as a business practice and competitive equilibriums are achieved by assuming such a practice. There is an inevitable gradual increase in transparency levels of the economy. However, several factors are still holding that back by penalizing the higher transparency in companies:

- **The risk of price adjustments:** Recent trends in the local business environment indicate that many companies are willing to shrink the shadow portion of their business activities. However, as these will inevitably cause price adjustments, they result in first-mover disadvantage. The first mover eliminating the shadow bears the risks of market share shrinkage before the whole market adjusts and the playing field is leveled.

- **Pressures by competition regulation:** The current policy is to control the companies with dominating market shares with tight reporting and price control limitations. The estimation of the market share is based on the reported figures of companies and does not account for the shadow portion. It thus puts an indirect pressure on companies that aim for higher transparency, as it artificially increases their “recorded” market share.

The current economic structure, characterized by the incomplete transparency, with power business groups and distorted competition, imposes a binding constraint over economic growth. It is very difficult to quantify the extent to which these factors constrain entrepreneurial activity. However, a number of factors demonstrate that they present a serious bottleneck:

- They consistently appear to be the most problematic areas for doing business in Armenia according to different assessments and rankings.

- Agents that are less susceptible to their influence (i.e., power business groups, tax evaders) are performing relatively better than other agents.
- There is more active foreign investment and entrepreneurial activity in segments where the influence of power business groups is limited, such as the IT sector.

Unfair competitive practices and the shadow economy create an atmosphere of negative reinforcement for new businesses. Entrepreneurship and business start-ups are held back due to the negative signals of the current economic structure.

*Despite critical concerns regarding macroeconomic stability, it is hardly a key factor preventing investments in Armenia.*

After the drastic deterioration of major macroeconomic parameters since the recent crisis, the macroeconomic environment started a slow improvement, while still bearing significant volatility. Inflation and currency exchange rates are key parameters that influence business decisions, and they have been quite volatile recently. Since 2008, the Armenian dram has devaluated against the US dollar by 31%. Armenia’s position in GCR by the inflation indicator worsened drastically in 2011 and the ranking fell by 41 points (from 78th position to 119th). It has significantly improved in 2012 (a price increase of only 2.6%) which ranked Armenia 1st among the list of countries. The next ranking may again report deterioration in the inflation indicators driven by higher inflation in 2013.

However, many big investment decisions are measured in US dollar terms, reflecting high dollarization in the economy. Moreover, the recent rise of a forex-denominated loan share in total debt confirms this trend (from about 40% in 2008 to about 60% in 2012). Therefore, despite the mentioned concerns it is difficult to argue that macroeconomic risks prevent investments in Armenia.

**Graph 2-34: Armenia’s Rankings by Macro Stability (in GCR); Government’s Failures by Key Macro Risks**

The general government debt and public external debt stocks are within manageable limits as defined by the laws and regulations of Armenia. A significant portion of the “long money” accumulated after the launch of the mandatory pension system in Armenia is expected to flow into government bonds, and according to experts the government may want to increase its internal debt. As a result, the general government debt as a percentage of GDP will grow but stay within the limits, according to estimates.
MARKET FAILURES

Existing market failures in the economy can be important clues about low economic appropriability. Furthermore, issues with market failures are often more complex than with government failures.

Two possible channels of market failures are information externalities or coordination failures. Both of these lead to low self-discovery, which means that the economy has difficulties in identifying productive areas to specialize. Weak performance in exports and innovation are among the symptoms of weak self-discovery practices.

Armenia’s economic development has entered an era where the pathway to further growth is mainly through exports, given the limited local market.

Local exports are on the rise, growing annually by 20% in the period of 2009-2013. However, exports are still significantly below local imports, causing a huge current account deficit in the country. The main characteristics of local exports are low sophistication, low diversification, lack of uniqueness, and limited potential of growth. Unless these hurdles are removed, local exports will not be a source of economic growth. Currently, Armenia lags behind nearly all countries in its income group by the share of exports in GDP.

Graph 2-35: Share of Exports and Income Levels\textsuperscript{25}, 2012

Armenia has one of the largest negative current account balances among the benchmark countries. In 2009, after the global economic crisis hit the local export industries severely, Armenia’s current account balance plunged to 16% of GDP—the 13th largest negative balance in the world. However, the subsequent benchmark analysis of export and GDP indicators in this chapter is done based on 2011 data.

\textsuperscript{25} In the result of the review of PPP conversion rates by WB, Armenia’s GDP per capita PPP was upgraded from ~6,600 USD to ~8,400 USD for 2012. This changes Armenia’s positioning in the income map of the world. However, the subsequent benchmark analysis of export and GDP indictors in this chapter is done based on 2011 data.
the world for the corresponding year.
Since then, the recovery of export sectors has led to a shrinking negative balance in Armenia, which reached its pre-crisis levels in 2011.

**Graph 2-36: Dynamics of Current Account Balance in Armenia**

![Graph showing dynamics of current account balance in Armenia]

*Source: WB WDI, EV analysis*

**Armenia’s exports are characterized by low sophistication – Armenia fails to follow the track of more developed countries in its export structure.**

Aside from the quantitative indicators, Armenia’s export basket stands out with serious structural issues that significantly weaken the role of exports in fostering economic growth in Armenia. Thus, according to Hidalgo et al. (2007) and Hausmann, Hwang, and Rodik (2007), the composition of a country’s export portfolio determines its growth potential and consequently outlines the development prospect of the economy. The authors find that certain activities have different marginal effects on economic development, which requires structural transformation in the export baskets and shift to more sophisticated activities.

An analysis of Armenia’s export sophistication reveals whether the export structure matters for growth in Armenia.

One of the most comprehensive indicators to witness the “quality” of the export portfolio is export sophistication (EXPY). It shows a country’s income level associated with a certain export structure and indicates the share of more sophisticated goods among the exports. The high sophistication of a country’s exports means that it resembles the export structure of economies with higher GDP levels. Hausmann, Hwang, and Rodik argue that developing countries that export more sophisticated goods — mainly typical to developed countries — grow faster, as they have cost disadvantages for producing the same set of goods.

The mapping of the global economies illustrates that there is a very strong correlation between level of income and export sophistication. Armenia’s performance by export sophistication is similar to the average level of EXPY in the countries of its income group (up to USD 10,000 at PPP adjusted prices). According to Hausmann et al., only countries that manage to have higher EXPY than their income group are well positioned to grow. Thus, Armenia fails to follow the track of more developed...
countries in its export structure, which limits its growth prospects. In addition, Armenia’s exports are the least sophisticated in the list of benchmark countries (except for Kyrgyzstan).

Graph 2-37: EXPY and Income Levels in World Economies, 2011

Source: UN Comtrade, WB WDI, EV analysis

Graph 2-38: EXPY and Income Levels in Benchmark Economies, 2011

Source: UN Comtrade, WB WDI, EV analysis

The decomposition of Armenia’s export portfolio demonstrates that the leading export commodities with more than 5% share in the country’s exports stand out with very low levels of sophistication (revealed sophistication of products, or PRoDY), lower than the average level of PRODY for the goods Armenia exports, while products with higher than average PRODY levels have meager shares in total exports. This leads to overall low sophistication of the export basket in Armenia.
The quality of Armenia’s export basket is undermined by its low diversification.

Export diversification is another measure of a country’s “export quality.” It shows the number of exported goods in which the country has revealed comparative advantage (RCA). The higher level of diversification means that the country has the capabilities to become competitive in a wider range of products.

Armenia’s position with the level of diversification is quite weak. However, many countries in the same income group have much lower export diversification compared to Armenia.

As of 2011, Armenia exports 82 commodities (4-digit HS codes) with RCA—only 14% of the total number of commodities exported by Armenia.

27 Revealed comparative advantage (RCA): if a country has an RCA in a particular commodity, the share of that commodity in its exports is bigger than the share of its global exports in the total volume of world exports.
Armenia’s export portfolio lacks uniqueness, which means that Armenia is not unique in exporting certain goods with competitive advantage.

The need for the assessment of the “standardness” or the uniqueness of a country’s export basket arises when comparing two countries with the same level of export diversification. The “standardness” measures how many countries export the same commodity with RCA that Armenia exports. The low level of the indicator means that the country is among the few exporters of the product. The more the country exports unique products the less standard is its export basket.

The level of standardness of Armenia’s export basket is 9% higher than the world average. The general trend is that the less an export portfolio is diversified, the less are its chances to be unique. However, a number of countries that have export baskets similar to Armenia in terms of diversification also manage to export more unique goods with a smaller number of competitors in the global marketplace.
The low option value of export basket shows that Armenia is challenged to discover new economic activities.

A country’s strength in self-discovery is measured by the positioning of its export basket on the product space map. If the country’s export portfolio is concentrated in the dense part of the product space map, there are many options for structural transformation for exports: there are many close products that the country can build export capacities for. The measure of the transformation options, called “open forest,” indicates the country’s potential to upgrade its export basket and grow. Thus, the “index of potential” is quite low in Armenia in the group of countries with similar export performance. Consequently, in order to expand its export portfolio, Armenia has to favor products that will require more sophisticated capabilities.
The problem of self-discovery is largely associated with the country’s ability to identify and specialize in higher productivity areas.

This ability is measured by the level of innovations and generated new ideas facilitating the development of new, non-traditional products that could probably be produced in a specific country but do not currently attract investment because of various market shortcomings. In this sense, innovation and R&D are an important component of growth strategies according to Hausmann, Rodrik, and Velasco. The authors substantiate the low levels of investment returns with the absence or slow pace of new productive ideas. Despite the expected high returns on the innovations and benefits of efficient self-discovery practices, economies have difficulties in triggering initiatives in the innovation sector. This is conditioned by the fact that new ideas are difficult and costly to develop but easy to copy, thus implying that returns to innovation may accrue to many participants and individual returns of the innovators may be downplayed.

According to Hausmann et al., the issues of self-discovery are more complex and challenging at lower levels of economic development. Another critical aspect of self-discovery is that in tradable sectors the process of self-discovery is more difficult, but the payoffs are higher. In the markets of tradable goods or services a country most often competes with international players, which limits the rent of discovery for the domestic players. On the other hand, “the payoffs can be larger in the tradable sector because the productive ideas can be scaled up to supply the world market, not just the more limited local market to which non-tradable activities are restricted by definition.”

The low state of development of Armenia’s innovation infrastructure adds another layer of restraint on the unfolding self-discovery processes. The innovation infrastructure is amongst the least developed aspects hindering the development of Armenia’s knowledge-intensive sectors. Despite the high prioritization of the high-tech and knowledge-intensive economy, the rank of the innovation pillar in the World Economic Forum Global Competitiveness Report is the lowest among other competitiveness factors in Armenia.

The low levels of commercialization as well as company and government spending on R&D endanger Armenia’s strong scientific heritage and diminish the creative potential to transform the economy towards higher value-added, sophisticated products. Even today, Armenia ranks more or less competitively on the availability of scientists and engineers, the number of patents, and general capacity for innovation, drawing on its strong scientific-technical heritage as well as new developments, particularly in the areas of IT and engineering. Generally, all post-soviet countries face a similar problem conditioned by broken links between industry and science. The restoration of this link and the upgrade of innovation capabilities constitute the core of the challenge of self-discovery.

### Table 2-10: GCR Rankings on Innovation

<table>
<thead>
<tr>
<th></th>
<th>Estonia</th>
<th>Poland</th>
<th>Armenia</th>
<th>Georgia</th>
<th>Albania</th>
<th>Moldova</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity for innovation</td>
<td>28</td>
<td>62</td>
<td>77</td>
<td>118</td>
<td>121</td>
<td>134</td>
</tr>
<tr>
<td>Quality of scientific research</td>
<td>25</td>
<td>55</td>
<td>106</td>
<td>124</td>
<td>121</td>
<td>132</td>
</tr>
<tr>
<td>institutions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Company spending on R&amp;D</td>
<td>45</td>
<td>103</td>
<td>109</td>
<td>128</td>
<td>82</td>
<td>142</td>
</tr>
<tr>
<td>University-industry collaboration in R&amp;D</td>
<td>36</td>
<td>72</td>
<td>107</td>
<td>132</td>
<td>135</td>
<td>129</td>
</tr>
<tr>
<td>Gov’t procurement of advanced tech products</td>
<td>34</td>
<td>103</td>
<td>111</td>
<td>62</td>
<td>52</td>
<td>139</td>
</tr>
<tr>
<td>Availability of scientists and engineers</td>
<td>95</td>
<td>66</td>
<td>74</td>
<td>126</td>
<td>106</td>
<td>131</td>
</tr>
<tr>
<td>PCT patents, applications</td>
<td>26</td>
<td>40</td>
<td>58</td>
<td>62</td>
<td>91</td>
<td>81</td>
</tr>
</tbody>
</table>

*Source: WEF GCR 2013-2014*
CONCLUSIONS

The growth diagnostics revealed three binding constraints negatively influencing returns to investments.

- **Lack of self-discovery**

With an unsophisticated export structure, lack of uniqueness, limited growth options, and a non-conducive innovation infrastructure, Armenia’s lack of self-discovery practices limit growth. The economy lacks the ability to identify what it can produce well and consequently misses the chance to pursue its most effective competitiveness-enhancing trajectory.

- **Insufficient quality of human capital**

While the local labor market does not have a shortage of an educated workforce, there is a tremendous mismatch between the qualitative specifications of demand and supply of the labor force in Armenia. A specific issue is the quality of management education, which results in a weak managerial capacity at local companies with very low operational efficiency and productivity.

- **Non-level playing field**

The unfair competitive landscape in many industries and pervasive shadow practices are probably the strongest binding constraint of growth in Armenia acting as powerful economic signals holding back business growth and entrepreneurial spirit in Armenia. The country’s existing power business groups often exploit better access to economic and political resources to gain competitive advantage.
The global financial depth, or the combined value of all financial intermediation as a share of GDP, reached nearly 312% in 2012, narrowing the gap with pre-crisis heights of 376%. The financial deepness level in Armenia is estimated at about 49% of GDP as of 2013. The fact that the financial depth is about 6 times lower than the global level indicates that Armenia’s financial system growth path is uneven. Is the financial system holding back economic growth in Armenia? Or is it vice versa? These questions are widely debated today and are raised in this chapter.

The local business (corporate sector) representatives and the financial sector institutions tend to have widely opposing views on this.

According to the survey of corporate executives, the easing of access to finance will have a material impact on the investment climate in Armenia and will raise the annual investments of the corporate sector by up to 50%. Meanwhile, most banks state that there is a shortage of loan-qualifying projects, otherwise financing would be cheaper and more extensive.

Due to the potential objectivity bias of the conducted surveys, a broader analysis is necessary in order to assess the cost of finance impact on economic growth. However, the surveys serve as an indication of possible issues both the corporate and financial sectors face, which need further exploration.

Access to finance constraint has three main constituents:

Generally, a healthy financial system effectively channels long-term savings to productive companies offering affordable interest rates and a diversified set of financial instruments.

Source: Structured interviews conducted with 75 corporate executives and 10 commercial banks, EV Consulting.

3.1 LEVEL OF DOMESTIC SAVING

The level of domestic savings is rather low in Armenia and mainly short term in nature.

The short-term nature of savings and relative shortage of long money skew the available investments towards short-term projects. The term structure of deposits in the banks reveals that only a meager share of deposits have maturity of five and more years. ~ 66% of total deposits have less than one year maturity.

Graph 3-1: Deposits of Businesses and Households in Local Commercial Banks, Share in Total, August 2013

Source: Central Bank of Armenia (CBA)

The growth of aggregate savings during 2003-2006 was significant; however, gross domestic savings rates were moderate overall during the last decade.

In 2006 the savings rate reached its peak of 20% of GDP, ahead of many CEE and CIS countries. The negative impact of the global economic crisis followed, dampening the savings rate and bringing it back to the level of pre-boom years.

Graph 3-2: Gross Domestic Savings by Country, Share in GDP (%)

Source: WB WDI
Household savings are the lowest component of total savings and were even negative in recent years.

The negative household savings figures reflect the low level of household income in Armenia. Additionally, this effect might be enhanced by the low level of savings propensity of the population.

Corporate savings account for the major portion of gross savings in Armenia. Public savings have been another significant contributor to gross savings, even during the crisis years. Household savings were negative in Armenia except for a short period in 2006-2008.

Graph 3-3: Savings in Armenia

Source: NSS

For the purposes of the current report two main indicators on savings were used: gross savings and gross domestic savings. Gross savings are calculated as gross national income less total consumption, plus net transfers. Gross domestic savings are calculated as GDP less final consumption expenditure (total consumption).

Pension system reform will perpetrate the “prolongation” of savings in the country.

Growth in pension fund assets will support effect in creating long money, which will reach up to 2.5% of GDP (estimated) in 2021. However, as the estimations below point out, GDP growth forecasts and pension system reform alone are not sufficient for a leap forward for domestic savings.

According to a study carried out by the World Bank, a 10% change in the GDP per capita of Armenia results in 3.7% growth in savings. Taking the GDP growth rates targeted by the Armenian government as a basis for calculation, the forecasted level of domestic savings in 2012 will reach only 4.7% of domestic savings in 2021 versus 6.5% in 2014.

Graph 3-4: Estimated Domestic Savings Forecast in Armenia

Source: WB, Ministry of Economy of RA, USAID Pension and Labor Market Reform Project
3.2 COST OF FINANCE

During the pre-crisis period the cost of finance was correlated with the investment dynamics in Armenia, but the link broke.

The analysis of quarterly data in the period of 2003-2007 reveals a strong negative correlation between the lending interest rate and Gross Fixed Capital Formation by the private sector in all sectors, excluding real estate. The existing negative link signals that high interest rates may play a constraining role in the growth of private investments in the economy.

Graph 3-5: GFCF Excluding Real Estate and Public Sectors and 1-5Y Business Loans Rate, Quarterly Data, 2003-2007

Notably, the link between investment volumes and lending rates is considerably weaker in the period 2008-2010. Investments declined steeply in 2008, affected by the economic crisis along with a substantial decrease in interest rates. As a consequence of the crisis, major investment projects were frozen and demand for new financial resources was down.

Graph 3-6: GFCF Excluding Real Estate and Public Sectors and 1-5Y Business Loans Rate, Quarterly Data, 2008-2010

Source: CBA, NSS, EV analysis
Overall, the decrease in interest rates in the post-crisis period did not result in higher investment rates in the country. The bank credit portfolio gradually increased throughout the period, whereas the GFCF rate has been quite volatile. Possible causes can be the increased problems with liquidity of local companies, which created additional demand for working capital financing rather than capital investments. Another major contributing factor has been the supply of relatively cheaper resources through state intermediation, such as the lending scheme under the USD 500 million interstate loan from Russia.

A note on the data analysis methodology

For the purpose of analysis, quarterly data set of Gross fixed capital formation (GFCF) and weighted average rates of USD and AMD denominated business loans for 1-5 year maturity are used. Real estate and public sector investments are excluded from the volume of GFCF, given that both have relatively low dependence on lending (the presales mechanism being the main financing scheme for the real estate sector, while state and IFI financing for the public sector). The data set of GFCF excluding real estate and public sectors is further adjusted to remove the seasonality factor.

Regression analysis revealed that in the period of 2003-2007, the business loans rate is a statistically significant indicator in explaining changes in GFCF.

International benchmarking reveals that the real interest rate in Armenia is higher than in most peer countries, exceeded only by Georgia.

Graph 3-7: Nominal Lending Rate (%), 2012

Graph 3-8: Real Interest Rate (%), 2012
As the analysis reveals, a lower interest rate is correlated with higher income. This indicates a potential for Armenia to decrease its interest rate to catch up with higher income-level peers. Thus, further growth of Armenia’s financial system may create competitive pressures to further decrease interest rates.

The structure of the main components of lending rates shows moderate potential of a decrease in rates.

The following stylized illustration provides the breakdown for lending interest rate components as of October 2013.

*Reverse calculated based on average interest rate spread and the average cost of funding indicators. All indicators of the chart are based on data obtained from Central Bank of Armenia. The risk premium is a derived indicator based on the rest of the data.
The average cost of funding for banks has recently been on the rise.

The cost of funding has been high in Armenia based on the country’s sovereign risk rate and the individual risk levels of the commercial banks, despite the availability of abundant financing from international financial institutions (IFI). The deposit term structure has traditionally been skewed towards the shorter end. As a consequence, banks have preferred funding from IFIs. However, over the last few years the competition among banks for deposit attraction has increased, which pushed up the deposit rates.

Graph 3-10: Weighted Average Cost of Funding and Interest Rate Spread for All Loans (%)

![Graph 3-10](image)

Source: CBA
*As of October 2013

Interest rate spread is still high in Armenia, although a declining trend can be seen.

The pipeline of new corporate clients entering the loan market is thin and has been depleting over the last several years. This intensifies competition among banks for existing corporate clients, pushing down the spread for business loans, which is lower than the spread for consumer loans.

Graph 3-11: Interest Rate Spread, Business Loans and Consumer Loans (%)

![Graph 3-11](image)

Source: CBA
*As of October 2013

However, the spread is still high compared to most benchmark peers, showing the necessity for a further decrease.
Higher efficiency of operations and possible consolidation can further reduce overhead rates.

Armenia’s stand in bank overhead costs is favorable among its income level countries; however, the higher income group countries understandably have better efficiency rates. The country’s leap forward will require an additional rise in efficiency rates and a decrease in overhead costs.

Source: WB WDI

Source: WB Global Financial Development Database (GFDD)
*As of October 2013
Scale, operational efficiency, and monitoring costs significantly influence bank overhead costs. Armenia's banking sector is quite fragmented with 21 commercial and one development bank in Armenia. Concentration in the banking sector is low, with cumulative assets of the three largest banks accounting for about 34% of total banking sector assets and a five-bank concentration ratio being one of the lowest among benchmark peers.

Graph 3-14: Five-bank Assets Concentration (%), 2011

<table>
<thead>
<tr>
<th>Country</th>
<th>Concentration (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Georgia</td>
<td>100.0</td>
</tr>
<tr>
<td>Hungary</td>
<td>95.4</td>
</tr>
<tr>
<td>Albania</td>
<td>94.8</td>
</tr>
<tr>
<td>Belarus</td>
<td>94.5</td>
</tr>
<tr>
<td>Lithuania</td>
<td>91.5</td>
</tr>
<tr>
<td>Uzbekistan</td>
<td>90.5</td>
</tr>
<tr>
<td>Macedonia, FYR</td>
<td>84.9</td>
</tr>
<tr>
<td>Romania</td>
<td>82.5</td>
</tr>
<tr>
<td>Azerbaijan</td>
<td>80.6</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>78.9</td>
</tr>
<tr>
<td>Croatia</td>
<td>76.3</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>75.0</td>
</tr>
<tr>
<td>Moldova</td>
<td>73.8</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>72.4</td>
</tr>
<tr>
<td>Slovenia</td>
<td>66.8</td>
</tr>
<tr>
<td>Latvia</td>
<td>65.6</td>
</tr>
<tr>
<td>Armenia 2013*</td>
<td>50.8</td>
</tr>
<tr>
<td>Armenia</td>
<td>61.5</td>
</tr>
<tr>
<td>Poland</td>
<td>59.9</td>
</tr>
<tr>
<td>Ukraine</td>
<td>45.4</td>
</tr>
</tbody>
</table>

*As of June 2013
Source: WB GFDD, CBA

A large number of banks and lower concentration result in a fragmented market. As a result, most banks have a smaller scale, and consequently higher operational overhead.

Furthermore, most of the overhead includes considerable security and monitoring costs caused by lack of transparency in the private sector and significant borrower risk. Banks incur significant costs to assess the true financial situation of companies, with additional risks arising due to non-transparency of borrowers.

Overall, the increasing competition in the banking sector could push banks to increase operational effectiveness lowering overhead costs. The introduction of innovative process automation and IT solutions can have a positive impact on operational effectiveness and reducing overhead.

The low level of transparency and maturity of the corporate sector results in high-risk premiums.

Part of the reason for the current interest rate levels in Armenia is the risk profile of the local corporate sector. There is an ample gap between corporate sector and banking sector risk profiles and maturity levels. The corporate sector development is one of the outstanding challenges for Armenia’s economy.

The corporate sector faces numerous challenges, including low transparency in financial reporting, lack of corporate governance, and low-level financial literacy in management.
All these factors result in untrustworthy financial reporting and forecasts. The risk for banks subsequently increases, creating an additional burden of administrative costs and the ubiquitous collateral requirement. However, even collateralized loans do not provide full security to banks given the illiquid industrial property and equipment markets as well as administrative and legal obstacles in selling the collateral.

The low financial literacy of the corporate sector results in decision making based on unsophisticated financial management practices. Most banks claim they cannot rely on information provided by the companies and create their own financial reports to make lending decisions. Additionally, the process of introducing innovative financial instruments by banks is slowed down. Collateral-backed loans remain the dominant lending instrument offered by Armenian banks. Around 72% of total loan portfolio constitutes loans backed by movable and immovable physical assets. Credit instruments, such as factoring and leasing, account for a low share of total banking sector assets.

An analysis of the risk profile of the total economy, measured by GDP growth volatility, shows that the Armenian economy is more volatile among the benchmark countries, which means a higher risk premium in Armenia. However, no direct correlation between the interest rate spreads and GDP growth rate volatility has been observed. GDP growth volatility is not a direct measure of risk level, although it is a reasonable proxy for an indication of the economy’s general risk profile.

**Graph 3-15: GDP Growth Rate Variance and Interest Rate Spread, Average 1997-2012**

![Graph 3-15: GDP Growth Rate Variance and Interest Rate Spread, Average 1997-2012](source: WB WDI)

The evidence on cost of finance in Armenia is not enough to qualify it as a binding constraint for growth.

The statistical tests on the links between private investments and loan rates are not satisfactory enough to confirm straightforward causality. The simultaneous move in interest rates and investments in the period of high economic growth can be explained by the decreased perceived riskiness of the business in a high-growth environment. The consequent contradictory movements in these parameters in the crisis period were the result of market disruptions due to non-market forces.

The real impact of the cost of financing shall also incorporate the peculiar structure of the local financial system. Cost of debt in Armenia merely reflects the interest rates on loans, due to the fact that no other financial instruments are widely available in the country. This has an adverse impact on the quality of local finance and can potentially skew the impact of cost of finance given that the supply is limited. Therefore, the availability of finance is no less an important factor in determining the impact of financing on the growth prospects of the economy.
3.3 AVAILABILITY OF FINANCE

The striking imbalance in the financial system of Armenia is driven by the overwhelming dominance of the banking system.

Armenia’s financial intermediation is heavily bank-driven with capital markets, private equity, and other alternative financial institutions still in embryonic stage of development. Among the same income-group countries the banking system accounts for about 60% of total financial depth, whereas the financial depth in Armenia is rather narrow, with the major share of the total assets controlled by banks. Credit organizations outnumber the banks but contribute to only a small portion of the country’s total financial assets.

Graph 3-16: Financial Depth Ratio (Excluding Public Bonds)  
Graph 3-17: Armenia’s Financial Depth Ratio, October 2013

Bank credit to GDP ratio, %  
Stock and private bond to GDP ratio, %

*Armenia’s GDP of 2013 calculation is based on the estimate by the Ministry of Finance of RA (Mid-term Expenditure Framework).

Banking intermediation has steadily increased and accelerated since 2007, but a further increase will be more costly and risky.

The growth of bank lending over the last decade has been impressive and uninterrupted by the financial crisis. Starting from a very low base the bank credit to GDP ratio has showed four-fold growth exceeding 40% of GDP in 2013. While during the pre-crisis period Armenia’s bank lending surge was fueled by economic growth, in 2008-2010 the uninterrupted growth in lending was partially sustained due to an injection of financial resources from the government as anti-crisis measures. Banks used a portion of these funds to refinance loans.

Graph 3-18: Bank Loan Dynamics, % of GDP

Source: CBA  
*As of October 2013. The GDP of 2013 calculation is based on the estimate by the Ministry of Finance of RA (Mid-term Expenditure Framework).
Along with expansion, the banking sector managed to record a low share of non-performing loans (NPLs) throughout the decade and stood at around 4.4% in 2012. However, some experts estimate that the real value of NPLs might be as high as 10-15%, as loan refinancing masks the true extent of bad loans. Official data shows that NPL ratios in Armenia are the lowest among benchmark peers. This reflects the consistently tight regulation of the banking sector (which may result in higher monitoring and administrative costs), the stable operations of banks, and the inclination to risk aversion. Yet, given the lower base of financial intermediation, this might reflect the fact that banks had a privilege to select the best borrowers first, and further expansion would require extension of credit to less sound segments of the economy. This will be both more costly and risky.
Compared to advanced economies Armenia’s private sector has higher than average levels of leverage. The distribution of leverage burden is uneven across sectors.

Armenian companies have higher than average levels of debt burden compared to developed countries. The debt-to-equity ratio in Armenian companies was around 0.6 as of 2012. Unfortunately, the data for peer country groups is not available.

Graph 3-21: Structure of Company Financing, 2011

Moreover, the distribution of companies as to their leverage levels is highly polarized. Generally, companies can be segmented in three groups by their leverage level. The underleveraged segment is comprised of MNCs or branches of international organizations as well as sectors with high profitability. Companies that are parts of international groups have access to affordable financial resources through their headquarters. Companies from highly profitable sectors, such as telecommunications and mining, generate sufficient retained earnings to finance their investment projects and are generally less inclined to source finances from local institutions. The highly leveraged segment is represented by manufacturing, energy, trade, food and accommodation services. The overleveraged bankable segment relies heavily on the local banking system, and most loan financing goes to refinancing outstanding debts by the same companies. These companies
generally have less equity and a smaller asset base, are trapped in restraining cash flow cycles and, hence, have less flexibility in their operational and financial decisions. According to business and banking sector representatives this segment is growing, posing considerable risks to the financial system.

**Lack of working capital financing instruments impedes operational growth opportunities for local companies.**

According to executives, a lack of diversified instruments for working capital finance restrains their expansion plans. Several peculiarities make working capital finance much more important for supporting growth in Armenia’s expanding businesses. The average working capital cycle is generally longer for local companies due to size disadvantages to negotiate better payment terms with international suppliers and, in some cases, buyers. Thus, it is a general practice for local companies to import raw materials and/or other merchandise with full advance payment. Furthermore, risks of disruption in transportation of goods, lower frequency and longer periods of international shipments, and customs-related administrative hurdles require Armenian companies to have considerably larger inventory stockpiles in their warehouses as protection against potential supply chain disruptions. In some cases, inventory is stockpiled to last up to two years. In consumer good markets, pressures from large retailers result in prolongation of accounts receivables, which can reach up to two months or more. Additional pressure on working capital comes from the practice of charging VAT at the border, which consumes company cash when importing raw materials or equipment.

Such prolonged working capital cycles require a diversified set of financing instruments provided by local financial institutions. However, the predominant asset-backed lending practices do not support this. Working capital finance requires more flexibility, faster decision making, and less bureaucracy. Factoring, purchase order financing, or other forms of working capital finance have a marginal role. One important initiative that will partially address this issue is the creation of an export credit agency that will provide insurance for exporting companies. Many other initiatives promoted by international development organizations are meant to change the situation, but these are still developing.

**SME sector financing relies upon financing funded by donor organizations and the state.**

Over 95% of registered entities in Armenia are small to medium-sized enterprises (SMEs), contributing to 45-50% of the country’s GDP (estimates made by the Ministry of Economy). The share of SME financing in total bank loans was about 25% (37% in total business loans) as of 2012.30 This skewness of financing towards bigger companies may indirectly indicate constraints that asset-poor SMEs and start-ups encounter in getting funding.

State and international organizations acknowledging the market failure in providing adequate financing to SMEs have been actively supporting several SME financing programs in Armenia. The scale of the state’s direct funding is still comparably small in relation to market size, but it has been growing in size and diversity of vehicles and tools. The Small and Medium Entrepreneurship Development National Center (SME DNC) supports micro enterprises, while SME Invest and Panarmenian Bank have a mandate to directly credit SMEs.

---

30 CBA
**The one-dimensional nature of the local financial system creates limitations for access to finance by companies.**

The global experience reveals that typically large companies source funding from capital markets, while SMEs borrow from banks. In Armenia, given the virtual absence of capital markets, large companies use bank lending and have become the key customers for banks, creating strong competition for SMEs. Moreover, the lack of access to equity markets limits growth of debt instruments due to risks of overleverage—debt requires an equity base. Thus, the banking system is close to exhausting the limits of the corporate sector niche that has a low risk profile and healthy cash flows—in other words “bankable” per currently imposed high standards.

**The immaturity of capital markets and private equity in Armenia further distort the distribution of capital and limits credit expansion.**

Given that on a comparative scale Armenia still holds moderate positions in terms of credit to GDP, at first sight this may indicate further opportunities for credit expansion. However, it should be viewed in the context of other financial assets expansion. Particularly, debt expansion in an economy shall be supported by an adequate base of equity. Armenia’s equity market development level poses significant constraints on debt growth.

**Several factors have impeded the development of the stock market in Armenia.**

Distinct privatization models, the small scale of the country, the shadow economy, and an absence of institutional investors have been the key impediments to the development of the stock market in Armenia.

Privatization, which played a major role in the formation of capital markets of other transition CIS and CEE countries, was missed as an opportunity to develop the stock market in Armenia. In many CEE transition countries four to five former state companies make up the core of stock exchange listings, forming a sizable portion of stock market capitalization. Typically in transition countries the top listed companies include former national banks and companies in infrastructure-related industries, such as telecommunication and utilities.

Small scale of the economy has resulted in very few big companies operating in the country. Over 95% of registered legal entities in Armenia are SMEs. This severely limits the potential base of eligible participants of capital markets.

This limitation is further aggravated by the existence of a shadow economy and widespread tax evasion, resulting in few transparent companies that could enter the equity market. The costs of becoming more transparent and improving corporate governance standards are still rather high and do not provide the financial incentive for businesses to go public.

On the demand side of capital market instruments the absence of institutional investors is a key impediment obstrcuting the development of capital markets. The insurance sector although growing is still very small. Reforms targeting the insurance sector were carried out only recently and the emergence of life insurance, which is generally a major source for capital market investments, is still far away. Pension system reform has the potential to increase the number of institutional investors to create demand for financial instruments and trigger the development of capital markets in Armenia.
Overall, not enough has been done over the last two decades targeted at equity market development in Armenia. The entry of the international Nasdaq-OMX group, which acquired both the stock exchange and the central depository in 2009, was a positive step toward stock exchange platform development. Many technical improvements have been made to the trading platform, introducing some of best global practices. However, the central depository still needs some operational improvements and particularly processing time reduction for paperwork and operations. After Nasdaq-OMX’s arrival an amendment was passed to give tax relief to companies who would list on the stock exchange. However, this policy did not have any effect on the equity market, mainly because it was a standalone measure while a comprehensive set of initiatives are needed to facilitate stock market development.

*Armenia has a growing government bond market, yet the yield curve fails to serve as an efficient benchmark.*

Armenia’s domestic public debt has been steadily growing, reaching almost 6.5% of GDP in the mid-2013. The government has established a rather sound, transparent system of public bond issuance. The primary placements are systemized and follow predetermined annual schedules, and regular semi-annual and annual reports on public debt management are published.

**Graph 3-22: Public Bonds Outstanding**

![Graph 3-22: Public Bonds Outstanding](image)

*Source: Ministry of Finance of RA  
*As of October 2013

However, beyond primary issuance the public bonds market tends to be illiquid and have a formal nature, with most investors holding the bonds up to maturity. As of June 2013, the main holders of public bonds that use them for repo transactions are banks (approximately 50% of total public bonds outstanding), followed by the Central Bank (approximately 40% of total public bonds outstanding).

The yield for T-bills is rather high in Armenia compared to most peers, setting the risk-free interest rate in the economy at a high level. Given the role of the money market as the basis of financial market development, the failure of T-bill yield to serve as a benchmark has a negative effect through the entire financial system.
The government has the practice of redeeming long maturity bonds within two to three years after issuance. Hence, a long-term bond is effectively becoming a two-year maturity bond with high yield. This practice creates distortions and gaps on the yield curve, which fails to serve as an effective benchmark.

The gap between government bonds yield and bank lending rates to large businesses is rather narrow, particularly for long-term loans. This is one of the impediments preventing companies from issuing private bonds in local currency. It also affects investors diverting them toward lower-risk but high-yield government bonds.

The public bonds market in Armenia not only does not yet provide the benchmark for private capital markets, but also might have a “crowding out” effect on private bonds, making them less attractive both for issuers and investors.
The issuance of Eurobonds is important for setting a benchmark in foreign exchange. The recent activity in the USD-denominated corporate bonds market cannot be sustained if a country level benchmark in forex borrowing is not established. Credit resources provided by international development institutions cannot serve this role as it demands rates set in a free market. The latter requires the country’s entry into international capital markets as a borrower. The issuance of Eurobonds by the Armenian government in 2013 is a major milestone in this regard. Armenian Eurobonds will help establish a forex benchmark yield curve, facilitating the development of a forex private bond market. Additionally, the availability of forex public bonds will have a positive impact on Armenia’s image in international markets and attract international investors to the Armenian financial market.

Corporate bonds in foreign currency may kick-start the revitalization of the private bond market. Armenian companies were not allowed to issue forex bonds until 2012, as a part of a policy to reduce the high levels of dollarization in the country. The removal of this ban was a positive step toward encouraging companies to issue private bonds. As of April 2013, 3 out of 7 corporate bonds listed on the stock exchange are USD denominated. A further increase in USD denominated corporate bond issuance is expected. The secondary market for corporate bonds is still highly illiquid. The main corporate bond buyers are banks. Regulations allow using corporate bonds with adequate rating levels for repo transactions. However, the share of private bonds in total repo transactions according to expert estimates is not higher than 5% (official statistics are not available).

Low availability of private equity (PE) and venture funds in Armenia results in a further imbalance in financing opportunities. Each of these institutions serves a specific set and segment of the economy currently underserved in Armenia. The volume of equity investments in Armenia is insignificant. Most often, the announced PE investments operate as subordinated corporate debt with a bullet payment. The total investments of PE funds in Armenia is estimated at around USD 60 million. Limited opportunities for exit stimulate PE funds to structure deals with put options granted to them at prearranged prices. Usually, investors exercise put options by providing additional senior debt to buy back the shares. Such forms of investments are not practiced in countries with a developed PE sector, and they do not lead to the massive development of the industry in Armenia. The absence of exit routes in Armenia is partly due to underdeveloped M&A and IPO markets. The low level of corporate sector development in Armenia is an additional impediment. The absence of corporate governance practices in most companies along with transparency issues and lack of awareness on international practices impose higher overhead costs for PE funds, creating the need for additional heavy due diligence assessments. As global experience reveals, companies with PE investments are generally more mature and prepared for the capital market, which can be explained by the following factors:

- PE funds impose higher management quality standards, gradually decreasing the share of shadow in the companies and facilitating corporate governance standards.
- Public offering is one of the major exit routes for PE funds.
- Companies with PE funding generally have a higher level of awareness on capital markets.

A survey among Armenian companies revealed that those with PE investments are more aware of capital market opportunities. Thus, fostering PE activity can become a policy tool to develop the
country’s capital markets. The experience of CEE countries reveals that the key significant sources for PE fundraising are IFIs, the government, and pension funds. Armenia can benefit from CEE experience, actively engaging these sources of funding to develop the local PE industry.

The establishment of the first Armenian venture fund in 2013–Granatus Venture Fund I, is an important milestone for the industry. This is expected to set a path to create a venture industry in the country. Currently, the lack of high-risk financing is a key factor causing slow rates in the development of a technological entrepreneurship culture in Armenia. A lack of equity investment culture, poor knowledge of international experience, information asymmetry, and market volatility are factors that hinder the development of high-risk financing in Armenia.
CONCLUSIONS

The core constraint to growth is one-dimensionality of the financial system. The entire financial depth of the economy is attributable mostly to banks. The narrowness of the financial system constrains the potential growth and investment opportunities of the economy due to the limited nature of the available finance and the rigid categorization of companies that can have access to it.

The stiff regulation of the banking sectors itself limits the latter’s flexibility. The growth of secured loans, the main financial instruments at the disposal of the banks, is naturally limited by the size of fixed asset of the “bankable” sector of the economy. This brings the growth agenda to a vicious cycle for the companies: more growth possible only through external financing and more external financing possible only in case of availability of more fixed assets to serve as collateral. Lack of equity instruments constrains the possibility of the companies to acquire more fixed assets and further increase the leverage of the companies. The issues related to cost of finance are second order issues stemming from the lack of diversified sources of finance.

Future-oriented funding institutions will be key to support the growth of the economy.

The banking system is positioned to favor companies that have accumulated certain wealth in the past. It fails to reward the future potential of the companies that lack accumulation of wealth at present. This “reward of past” is non-conducive to growth which entails self-discovery, experimentation and risk taking. Any high growth economy finds mechanisms to fund future-oriented behavior rather than assets, revenue streams and wealth that are attributable to the success in the past.

Development of capital markets, new instruments for funding working capital and long-term investment projects, private equity and venture finance have the potential to balance out the access to finance and incline the financing towards more forward looking projects. Overall, together with the institutions of pension fund, longer term insurance instruments and private equity, the capital markets aspire to establish the grounds for long-term thinking and planning by the economic agents. These will be the first institutions that can accelerate the long-term planning, investing and generally strategizing among the corporate sector.

Efforts to develop financial systems are useless without parallel efforts to upgrade the corporate sector. The development of the more transparent, well managed and financially sophisticated corporate sector has a decisive role on the further potential of decreasing the cost of finance and development of more sophisticated funding instruments. Lower risk profiles and higher transparency will result in lower overall cost of finance. The role of the corporate sector maturity is substantial in marking the possibility of capital market growth in the country.
Sustainable and high growth in Armenia requires removing key binding constraints to growth. Unless these constraints are removed, multiple efforts will fall short of putting Armenia on a high growth track. Scarce financial, managerial, and reputational resources will be wasted.

Policy prioritization shall be transformed from a window-dressing concept to a tool that enables making hard choices. Real prioritization implies concentrating and dedicating the most and best resources to addressing prioritized issues. It rejects other alternatives and addresses the consequences of such a choice. It also rejects consensus-based decision-making that tries to accommodate all legitimate interests. Growth imperative is now translated into prioritization imperative.

The strategy of prioritizing the constraints and handling the *binding constraints* has the advantage of dealing with only a handpicked set of problems first. Instead of wasting efforts on dealing with a thousand issues at a time, the government’s agenda of change supported by the private sector needs to be *focused* on a handful of priority issues.

ACR identified four key areas that currently impede growth through restraining more productive and massive investments in the country. Those are:

- Distortions in competitive landscape
- Lack of self-discovery
- Insufficient quality of human capital
- One-dimensional financial system

As growth constraints are country-specific so are remedies. While the strategies and tactics to address the constraints are not straightforward, a set of premises suggested by global and Armenian practices provide a few options. The distorted competitive environment shall be addressed through a consistent and comprehensive effort to create a fair and level playing field. Lack of self-discovery is generally addressed through a focused industrial policy that may have different specifics in different countries. Human capital constraints can be removed by making education an attractive area for massive investments. Overall sophistication of the financial system through the introduction of new tools, institutions, and game rules are required to address its one-dimensionality. Thus, the change agenda that needs to be spearheaded by both public and private sectors includes these four broad policy areas.

**Graph 4-1: Growth Constraints Removal Agenda**

<table>
<thead>
<tr>
<th>Distortions in Competitive Landscape</th>
<th>Lack of self-discovery</th>
<th>Insufficient quality of human capital</th>
<th>One-dimensional financial system</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Public-Private Change Agenda</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Creating level playing field</td>
<td>Industrial policy</td>
<td>Massive investment in education</td>
<td>Sophistication of financial system</td>
</tr>
</tbody>
</table>
4.1 CREATING LEVEL PLAYING FIELD

**Agenda**

The creation of a transparent level playing field for all businesses and economic entities is the key agenda issue with the following main constituents:

- Eliminate the shadow economy in the country;
- Root out practices of discriminatory and arbitrary tax and customs treatment of businesses;
- Improve practice of identifying and preventing abuse of market power and other anti-competitive behavior;
- Secure and protect private property rights;
- Ensure transparent, fair, and competitive public procurement system.

These factors are tightly interlinked. They form the backbone of a country’s institutional environment. However, the elimination of shadow economy and ensuring transparency of companies has a central importance among other factors. Reform of the other factors, without addressing the mentioned particular one, will not lead to the desired results. The efforts to prevent anti-monopoly practices and initiatives to ensure fair government procurement system will not be fully efficient if a considerable shadow economy exists. Therefore, in the following chapter we will mostly focus on the issue of transparency, as a precondition of creating a level playing field.

Leveling the playing field for all businesses will provide a powerful green signal to entrepreneurship in the country in general and will set an inclusive and pro-growth course for the economy.

**Root causes to attack**

A deeper understanding of the root causes of an institutional framework that brought to distortions in competitive environment is essential in designing an enforceable strategy to overcome it. The roots of the current situation can be traced down to political choices made by the country. The current economic architecture reflects the extractive and non-inclusive nature of economic and political institutions that have been shaped since Armenia’s independence.

Below are some hypotheses of the causes that make the current status quo harder to change:

- The strong ties of political and business elites in Armenia. This translates to strong impact of the selected business interests on political choices.
- A dynamic equilibrium between different power groups of business and political elites. This results in a situation where no one is interested in radically challenging the status quo. Any change bears the risk of worsening the position of some groups.
- Lack of a dominant and coherent power group with principles of meritocracy that is strong enough to impose a course of action.
- The inherent economic limitations of the country and lack of attractive exporting opportunities. The consequence is that the leading business groups are domestically oriented and crowd out investment opportunities in the limited local market.
**Strategic options for creating a level playing field and ensuring transparency**

Addressing a complex issue requires a well thought-out strategy and ruthless execution. Strategies are dependent on what setup of power relationships would be formed to drive such change. A strategy executor is not “the government in general.” The government is not a homogeneous entity with clearly defined objectives. It reflects the relationships between power groups. Moreover, as large businesses are predominantly controlled by power elites they are on both sides of the game — as subjects and objects of policy. Interlinkage of different group interests forms the context for any government’s action agenda. Thus, several options for addressing the challenge of creating a level competitive and transparent environment in Armenia imply a political configuration where a power group that forms a part of the government becomes motivated to implement change.

<table>
<thead>
<tr>
<th>Blanket approach</th>
<th>Phased approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Broad-based approach</td>
<td>Sequential approach</td>
</tr>
<tr>
<td>Sector-by-sector approach</td>
<td>Alternative sector approach</td>
</tr>
</tbody>
</table>

**BROAD-BASED APPROACH**

**Essence:** This approach implies comprehensive administrative improvement across all segments of the economy started at the same time. The new game rules are enforced starting from a specific time point. The approach rests on the concept of a critical turning point when an irrevocable commitment to enforce the same game rules to every economic agent takes place.

**Enforcement:** The enforcement of this approach implies “tacit amnesty” of previous unofficial financial flows and a fresh start from a blank page. The enforcement of the new rules of game are to be executed across the whole economy. Caution is needed to escape the caveat of letting companies think that non-transparency is acceptable and compromises are possible. A strong and uncompromising enforcement in the follow-on period is essential to address this risk. Many economic agents will be naturally motivated to reveal “non-compliant” and opportunistic behavior of competitors and other agents. This will help increase pressure on non-complying agents. However, the fear of change and the distribution of power among elite groups will require a great amount of political will to execute this strategy.

**Impact:** The impact will be economy-wide. It will reinforce the sense of fairness. Success will be marked by new behavior of all economic agents, including the government. Success will also mean that transparency is the new norm and usual business practice.

Relative price adjustments will take place across the economy to absorb the new cost structure. Additionally, the pressure on corporate performance will become much stronger on competitive industries versus more concentrated ones. This may lead to further consolidation in some industries and even bankruptcies in selected cases. In the long run productivity will become the ultimate measure of competitiveness rather than preferential market position and access to administrative resources. This approach may lead to the biggest increase in tax revenues in the short term, and bigger resources will be available to address the social needs of vulnerable groups of population.

**Execution risk:** The risk of failure is inversely proportional to the strength of commitment and ability to execute by the power elite implementing the reform. A higher risk exists in the government’s capacity to execute this strategy — all sectors need to be addressed at once and the monitoring and execution resource requirements are higher.
SEQUENTIAL APPROACH

**Essence:** The essence of this approach is to start off with a few high profile cases with significant demonstration effect and follow-on rollout of “cleaning” throughout the system. The selected businesses shall have dense links through supply chains in upstream and downstream industries to enable multiplier effects unfold across the entire economy. High profile cases will send an intended signal throughout the system if they are not politically motivated and aimed at bullying political opponents. This approach requires maintaining a subtle balance between the timing of selective high profile interventions and follow-on rollout throughout the system.

**Enforcement:** The practical enforcement of this approach requires the highest level of determination, political will and enforcement resources. The government needs to announce and execute it by practically demonstrating what is at stake in case of non-compliance. The best effects are attainable if intervention is aimed at assuring full tax-compliance by a few dominant business groups. Tax evasion is a pervasive business practice that has the biggest distortive effect on overall business environment. Therefore, the intervention will address a core issue. The execution of “selective justice” will send the signal across the entire economy if followed by a consistent, widespread rollout. Otherwise, this can turn into a more vivid example of discriminatory approach.

**Impact:** Several major businesses may be affected as a consequence of intervention. The follow-on adjustments will depend on the reaction not only by the targeted businesses, but also related businesses across the supply chain. The post-execution period will show the new role distribution in the economy. A successful execution will lead to the emergence of new behavioral patterns better adapted to new rules of game and lean towards higher transparency.

This approach firstly targets major companies and business groups that have substantive roles in the economy today—as pioneers of transparency. This will mean new competitive power distribution in the economy where more competitive companies will win higher market shares in the long run. The time lag required for adjustments and entry of new companies may cost the country a temporarily reduced economic activity in certain areas. Corporate adjustments to higher transparency may entail higher price levels for certain product categories, while higher productivity requirements lead to less need for a labor force and, hence, intense pressure on the employment market. These can be offset if higher tax revenues are translated into more targeted and enhanced social security.

**Execution risk:** There is a risk of resistance mainly by the currently powerful and largest business groups. This will engage leverage of political clout and threaten the stability of the system. However, the biggest risk is that the interventions will not lead to achieving system-wide transparency.

SECTOR-BY-SECTOR APPROACH

**Essence:** This strategy implies a phased approach and focuses on ensuring transparency sector by sector rather than across the entire economy simultaneously. The new game rules are established through an informal collective agreement between all sector players and the government. This needs to start with sizeable sectors. As market players in the same sector are direct competitors, this approach is meant to assure that everyone is treated equally and unbiased if the game rules are not violated. One of the strongest hurdles impeding the elimination of the shadow economy is the *first mover disadvantage of full transparency*, which is especially fierce within a specific sector/segment. The reduction of the unregistered portion of business activities places serious pressure on corporate profit margins when no price adjustments occur. Whereas individual price adjustments will cause companies with higher product prices to lose significant market shares.
The sector-by-sector approach will allow the individual market players to avoid this and will enforce a level playing field for all companies within the sector.

**Enforcement:** The enforcement of this strategy shall focus on keeping the “accord” between the government and all sector players. Any violation of the rules by any party (including the governmental bodies) shall be “disclosed” to the parties of the “accord” and collectively addressed. The overall success of this approach is dependent both on the government authorities to play fair and non-discriminatorily and the market players’ ability to self-organize and prevent opportunistic behavior.

**Impact:** The sectorial approach implies a gradual shift in the economy and a slower transformation. It will create segments of more transparent businesses during the course of time. The process will be uneven with inevitable retreats and pushbacks. However, attaining full transparency and a level playing field will be hard to achieve even within the targeted sectors if no parallel efforts are made to address cross-cutting drawbacks of the business environment.

**Execution Risk:** This approach inherently implies lower execution capability of the government or its progressive part to tackle the issues across the entire economy. This means that the execution risks are limited to targeted sectors. A specific risk under this approach is that without an economy-wide “cleanup,” for some companies it will be practically impossible to be 100% transparent. Issues such as transparent government procurement, non-discriminatory and efficient customs procedures are predominantly not sector-specific. If unaddressed they may risk the execution of the strategy.

**ALTERNATIVE SECTOR CREATING APPROACH**

**Essence:** This approach focuses on seeding and growing new and more transparent segments of the economy with spillover effects across the entire economy. This strategy avoids directly addressing the issue of a distorted competitive environment and tries to overcome it through building an alternative with the hope that it will become important and powerful enough to overwhelm the rest of the economy. In an ideal situation, such alternative sectors are mostly comprised of multinationals (MNC). The positive externalities of MNCs to the economy are multi-faceted and widely accepted.

**Enforcement:** This approach is not mutually exclusive of other approaches and can be both executed as a standalone approach and combined by one of other three approaches. In the initial stages, the execution of this approach may require creation of physically and administratively detached areas where foreign companies operate without much intrusion from the current regulatory environment. This could be achieved, for example, through establishment of free economic zones (although they tend to have weak ties with the domestic economy). This also requires a radical shift in FDI promotion policy, treatment of foreign investments and world-class execution capabilities.

**Impact:** In the short run the impact on transforming the competitive environment will be limited. It will grow in parallel to the increasing share of the “alternative sector” in the domestic economy. The importance of the sector will allow reformers to leverage it to push the reform agenda further. Therefore, the overall success will be dependent upon how successfully the next stage of rollout will be executed, which again would require a combination of elements of the first three approaches.

**Execution Risk:** The main difficulty of this approach refers to the capacity and opportunities for attracting foreign companies given not only administrative, but also inherent market and resource limitations. Another layer of risk is the ability to grow such a sector in isolation and then transfer the best practices into other segments of the economy.
4.2 ENHANCING SELF-DISCOVERY PRACTICES

Agenda

Growth diagnostics states the lack of self-discovery practices in the Armenian economy as a key binding constraint to acceleration of economic growth. Discovery and seizure of new opportunities in foreign markets is the core issue. With a limited local market, Armenia has no other option than expansion of its tradable sectors through exports. Thus the core agenda for economic transformation will be the expansion of the economic base for value creation by:

- Scaling up exports of existing products;
- Tapping into new product markets where Armenian producers could gain competitive advantages.

Root causes to attack

Studies by EV Consulting, particularly in the framework of developing the Export-led Industrial Policy and sector strategies, identified the following critical factors responsible for the low level of export sophistication:

- Scale inefficiencies that limit the ability to produce products in required quantities for export markets and to generate enough resources to invest in marketing and innovation.
- Inconsistent product quality due to the lack of an up-to-date quality assurance infrastructure.
- Unfavorable logistics due to geographic location coupled with burdensome administrative barriers at customs.
- Coordination failures to ensure availability of critical inputs (human resources, laboratory infrastructure, etc.).
- Limited innovation, with a lack of market knowledge and consumer insights for new product development, limited investment in R&D and collaboration with academia and research institutions.
- Unsophisticated entrepreneurial skills and aspirations for international business.
- Weak institutions (formal and informal) for collaboration: underdeveloped sectoral associations and unions.
- A general lack of any specific country image related to economy and products with the exception of few traditional products and services in traditional markets.

Strategic options

The experience of the new industrialized countries that showed breakthrough growth pinpoints an active role of the government to address critical market failures and foster structural transformation through industrial policy. The scope and extent of government intentions varied from country to country, depending on the specifics of their economic, social, and political structures. Export-led Industrial Strategy, adopted in 2011, marked a paradigm change in the overall logic of growth policy in Armenia. The approach is based on the fundamentals of the new industrial policy concept.

The new industrial policy initiates self-discovery processes by engaging key stakeholders from private and public sectors. That will lead to a shared vision and strategy and coordinated actions through private-public partnership platforms.
The industrial policy aims to complement macroeconomic policy and business environment reforms to foster structural transformation of the economy, shifting from resource intensive to knowledge-based sectors. In an uncertain, permanently changing environment, this process needs to be dynamic and transparent, representing a joint discovery by government, academia, and the private sector to reach the desired state of economy with permanent review and adjustment of actions. The participation of the private sector and transparency of the whole process, starting from strategy design to implementation, is crucial.

Limited resources and capabilities require prioritization and focus. A full account of possible synergies between current and upcoming initiatives is crucial to avoid duplications and gain maximum efficiency of efforts. Armenia’s Export-led Industrial Policy identifies six clusters with different development horizons to initially target: food, health, tourism, jewelry/diamonds, high-tech, and resource-based sectors. The goal of the policy is to scale up existing capacities in the mid-term (Horizon 1-2 sectors) and nurture growth potential of emerging high value-added sectors in the long-term perspective (Horizon 3). This three-horizon view implies a seamless synchronization of three types of efforts: 1) develop existing competencies, 2) attract competencies from abroad, and 3) build new competencies. The first type of effort shall focus on building and developing existing local export-oriented clusters. The second type of effort shall focus on foreign companies (particularly multinationals) with advanced technologies and wide market access. The third type of effort shall be aimed at building an innovation system locally that can boost productivity of local companies and foster the creation of new innovative, productive companies. Thus, the industrial strategy needs to be built on three main pillars with a specific policy focus.

### Building local clusters of export-oriented businesses

- Easing access to long-term capital investment and export financing
- Establishing a high standard quality assurance system
- Ensuring critical intangible inputs such as education and training
- Implementing country/product branding in target markets and export promotion at specific sector levels
- Seeding cooperation culture: strengthening cooperation platforms and dialog within clusters

### Attracting FDI

- Promoting the country with a specific value proposition
- Utilizing resources from the Diaspora efficiently
- Establishing targeted FDI incentives
- Working proactively and directly with targeted foreign companies

### Crosscutting: Developing innovative capacity

- Building a local ecosystem for innovation
- Facilitating collaboration between key actors on innovation: private sector, university, research institutes, and other hubs of innovation
- Engaging research and development activities of MNCs in Armenia and building linkage with the local research community
- Fostering technology entrepreneurship by easing access to capital, knowledge, and networks
BUILDING LOCAL CLUSTERS OF EXPORT ORIENTED BUSINESSES

**Essence:** The aim is to increase the international competitiveness of targeted local clusters by tackling the bottlenecks throughout value chains. It addresses critical issues such as quality assurance and technological upgrades, availability of inputs, establishing a business environment, privileged access to foreign markets through trade agreements, and country image building.

**Enforcement:** Public-private collaboration platforms, such as Industrial Board chaired by the Prime Minister of the RA and sectoral boards have been established to discuss and reach mutual agreements on strategy, actions, and expected results. The performance of these boards differs from one sector to another depending on the collaboration culture among companies of the sector. The direct outcome of the latter is the low development of institutions of collaboration, such as business associations.

In the same time, the effective management of public-private collaboration is critical in fostering constructive dialog and coordinated actions by all engaged parties. The action plans are often not effectively implemented due to the lack of sector-specific expertise, professional facilitation and communication skills in particular institutions.

Industrial policy, which is a complex and sophisticated policy domain, implies high-quality execution capacities in the areas of project management, export promotion, and infrastructure development. It also requires fundamental revision of HR and compensation policies in the corresponding domains in the public sector.

Clear sunset clauses for support interventions shall be defined. The initiatives shall aim to foster initiatives in strategic areas and refrain from turning into another inefficient subsidizing mechanism.

**Impact:** Entry into new export markets and expansion in current markets by local companies are long-term, costly endeavors. The transformation could take longer time and require more intensive government involvement and larger investments made by the private sector, especially for developing new growth sectors. Therefore, the tangible fruits of the policy can be collected in a long-term perspective. However, there are a number of areas where “low hanging fruits” indicate the potential to show quick wins and motivate the process participants. The intensifying dialogue in particular sectors, which is unfolding within the framework of industrial policy, are positive signals to the private sector and raise interest toward the sector, consequently encouraging to review their strategic ambitions.

ATTRACTING FDI

**The essence:** FDI could become a source for swift expansion of productive capacities and export through the transfer of technologies, management expertise, and access to markets.

Armenia possesses certain cost and non-cost advantages for foreign investors that need to be well articulated and professionally communicated to potential investors. The availability of talent (including Armenia’s ability to engage the Diaspora) should be the core theme for Armenia’s value proposition supported with other assets, such as access to a preferential trade regime with the CIS (pending membership to the Eurasian Customs Union may be cleverly used for better FDI positioning), a competitive regulatory environment, comparatively low costs for certain inputs (gas, electricity, selected telecommunication services), and skilled labor.

---


83
Enforcement: Armenia does not have clearly formulated FDI attraction policy. The set of FDI incentives (fiscal and financial benefits) Armenia offers to its investors is quite limited in comparison with comparable countries from CIS and Eastern Europe. In addition, the Armenia Development Agency, which is the main responsible institution for FDI promotion, has very weak institutional capacities due to insufficient resource allocation, as well as execution capabilities. Diaspora-based personal and business networks are Armenia’s unique assets, which are, however, not fully utilized to gain access to top-level decision makers at large foreign companies and facilitate the negotiation process.

Impact: FDI could accelerate economic transformation of the economy through “imported” capabilities (technology, skills, market access). However, structural change will be shaped by foreign investor agenda rather than government priorities. There is also the probability that foreign companies will remain detached from the local economy by creating only limited inter-linkages with local suppliers and not integrated in national value chains.

DEVELOPING INNOVATIVE CAPACITY

Essence: The transformation to a knowledge-based economy requires an established ecosystem of innovation. Besides well-functioning “hard” components (educational, research, financial infrastructure), a special entrepreneurial mindset and an environment for innovation is critical.

The role and importance of innovation varies for different sectors targeted by industrial policy. Innovation is critical for knowledge-intensive sectors such as engineering and IT and could contribute to the creation of higher value-added activities and increase productivity in skill-intensive sectors such as food processing, pharmaceuticals, and jewelry. Specific mechanisms and focus need to be applied for each direction. The cultivation of start-ups (including spin-offs from international technology companies or research institutions) and attraction of R&D activities of multinational companies will be the focus in IT and other high tech sectors.

Enforcement: Building a robust innovation system requires a holistic approach and substantial long-term investment. Parallel efforts shall be made to nurture demand and supply-side factors. On the supply side, reforms in higher education and science are critical. Reform requires radical approach rather than the current incremental and fragmented efforts. Though several large-scale innovation projects (ANEL, Microsoft Innovation Center, Armenian-Indian Excellence Center, STEP program etc.) are initiated, they are mainly concentrated in IT sector. Armenia still lacks a comprehensive strategy for innovation promotion.

Impact: It might be a decade before tangible results in building innovative local clusters are reached. However, once innovation becomes a critical factor for competitive strategies of Armenian companies, it will transform the way business is conducted.

Key challenges and risks for Armenia in implementing industrial policy

- Deficiency of trust between government and the private sector

There is significant accumulated distrust between government and the private sector. A behavioral change needs to take place, and the government needs to take the lead. Due to governmental prioritization of industry and the participative process of strategy formulation, social capital was generated and expectations emerged. Now is the time to deliver tangible results — quick wins — to keep the commitment of parties and capitalize on shared success for undertaking more complicated endeavors.

- Limited resources and inappropriate implementation capacities

The current budget allocated for the implementation of industrial policy is marginal (even taking into account loan resources allocated through SME Invest UCO) compared to the ambitious goals to triple exports within 10 years.
Execution capacity suffers from unclear distribution of functions between different agencies and a mismatch of skills with new responsibilities regarding industrial policy. Industrial policy is complex and sophisticated and requires top-level execution capabilities, calling for a fundamental revision of HR policies.

- **Unsynchronized government policies**

Uncoordinated changes in different government policies are diluting their effectiveness. Very often, short-term fiscal goals prevail over long-term growth objectives. In some cases public investments or regulations do not correspond with realities in the private sector. For instance, the introduction of 20% tax on purchase of services from non-residents outside the territory of the RA substantially hurts exporters through increasing costs related to marketing and promotion.

Industrial policy is supposed to set demand for private sector-related government policies (tax and customs, education and science, quality assurance). Clearly defined strategic goals for economic transformation could assist the government in setting an agenda for those policies and ensuring coordinated actions.

- **Private sector risks**

Economic transformation takes place if private businesses change. The gap in knowledge and skills on foreign markets and management practices, costs and risks associated with the development of new products, and entering new markets could hold companies back from initiating change.
4.3 EDUCATION AS A CONCEPT OF NATIONAL ADVANTAGE

Agenda

Human capital development is an absolute imperative for Armenia. The destruction of the following vicious cycle is possible only by addressing human capital development first.

A proactive approach is needed through investments in human capital. Moreover, the cornerstone of the development agenda needs to be the implementation of a self-reinforcing system that, in addition to serving economic growth, would also become the driving factor for productivity and economic development.

Root Causes to Attack

Human capital development factors are complex, while causal links are not straightforward. Throughout the course of time, the complexity increases and the causal links become blurred. For analytical purposes, the issue can be viewed on three levels that shape quality workforce: higher education quality (supply of resources), professional development infrastructure (development of resources), and migration (retaining the resources).

Poor Quality of Higher Education\(^\text{32}\)

In the context of economic productivity, the quality of higher education is both a cause and an effect factor. On the one hand, the low professionalism of the workforce leads to low productivity and, consequently, lower competitiveness of companies. On the other hand, due to low productivity, the companies cannot afford to recruit higher qualified professionals. This creates a vicious cycle where the inability of a business to recruit a higher qualified workforce indicates low demand from the educational system, which, therefore, does not produce highly qualified professionals.

Thus, the current state of higher education in Armenia is conditioned by low sophistication of both demand side and supply side factors. The focal root causes can be classified into the following groups:

- Lack of a well-defined national strategy on education synchronized with the country’s general economic strategy;
- Lack of leaders with contemporary management skills and a long-term vision in education;
- Social values and motivation for getting higher education are being transformed, influencing the quality and demand for education. As a result, society begins questioning the overall value of education, giving more importance to material assets, networks, and power, which leads to the devaluation of professional skills;

\(^{32}\) The report addresses issues concerning higher education only.
- Low level of internationalization of educational institutions;
- Outdated approaches to learning, limiting practical capacity building opportunities that are in high demand by employers.

**Insufficient Levels of Training and Professional Development**

The infrastructure for lifelong education and professional development is not yet fully formed in Armenia. According to Armenian companies the insufficient number of professional trainings and development opportunities in the country is one of the key drawbacks of the professional educational system.

The pivotal issues concern two central factors: lack of either general managerial skills or a shortage of function-specific or sector-specific professional capabilities. The low quality of general managerial skills is due to overall insufficient education in management, while the major constraint of function/sector-specific skillset development is the limited supply of professional training and development opportunities.

As a result companies are forced to pursue training and professional capability development programs for their staff abroad, which often is very costly and unfeasible considering their financial capabilities.

This issue is critically important in the context of industrial policy, with sectorial strategies requiring the development of highly specialized skillsets and capacities.

**Emigration of Highly Qualified Workforce**

The emigration of highly qualified professionals is one of the most complex challenges for Armenia threatening its economic and demographic stability. As opposed to the mainly seasonal emigration of a low quality workforce from Armenia, the more recent trend is the outflow of higher qualified management and professional resources.

The causal links of emigration of management and professional resources have certain specifics:

- The prosperity and unemployment levels in the country are one of the prime underlying reasons of emigration in all layers of society. This is a global phenomenon and is not specific to Armenia.
- The small size of the economy limits professional development opportunities. Practically, this has two implications: the small economy and limited diversification define the narrow scopes of economic activities and professional specializations. Thus flexibility in choosing professions and finding or changing jobs is limited. Furthermore, companies in Armenia are small in size, which is predefined by the overall size of the economy. Low corporate revenues, limited capabilities of working in international markets, and a relatively slow growth pace restrain self-realization and professional growth opportunities.
- The sentiment of economic agents has a significant role in shaping economic development. Emigration flows from Armenia are driven by both economic and non-economic factors.

**Strategic Options**

**Education as a Concept of National Advantage**

Human capital can become the cornerstone of national competitiveness only when Armenian society radically transforms its perceptions about the role of education. For human capital to become Armenia’s competitive advantage, the most important institution responsible for “producing” human capital, namely the higher educational system, must become the primary development target. This transformation can take place in line with economic development in countries with more organic development dynamics. Armenia needs to adopt asymmetric growth
measures, and that can be achieved only if Armenian society perceives education as the core of its national sustainable existence and competitive advantage.

The concept of lifelong education and a learning society is not new, but there are no recorded best practices of its application yet. The small size of the country, the inherent limitations, and the fact that Armenian society has historically been very keen on receiving education create a favorable environment for building such a society. Moreover, having the long standing and positive experience of uniting around the concept of education, Armenian society has the potential to make education the cornerstone of its development.

**The Vision of Education Suggests Fundamental Shifts in Mentality and Behavior**

The implementation of this vision suggests the following mental and behavioral changes:

1. Large-scale investments in education are a precondition for rapid development.

   Economic development will be preceded by investments directed towards improving the quality of human capital. Only massive investments can have sizable impact, whereas the subscale investments that do not result in the creation of world-class knowledge and skills can be deemed ineffective. Investments cannot be measured by local standards.

   Educational spending should be considered not merely as an important public investment, but rather as a means to eliminate the constraints to economic growth. Similarly, private sector investments in the professional development of employees should be viewed as a means to gain a competitive advantage, the investments made by families being a reliable way to ensure the best future for the next generations.

2. In the context of disruptive changes in the education sector, Armenia can become an innovative technological hub.

   Digital technology has fundamentally disrupted and redesigned various sectors; however, education is still on the verge of revolutionary change. There is active exploration and experimentation taking place all over the world. Perceptions are changing regarding how, where, and when the learning process takes place. Armenia can become a leader in the design, application, and development of new educational models. The process can take shape by starting with a few small hubs, with a high concentration of ambitious professional resources. The recent formation of a few educational institutions with world-class ambitions (TUMO, Ayb, UWC Dilijan international school, ANEL Laboratory at ASEU) is a viable precedent.

3. The teaching profession (in a broad sense) is to become one of the most prominent professions in society, with competitive remuneration levels.

   The teacher is the key agent in a learning society. This will require the top quality human resources in the sector. Higher than average remuneration levels as well as high professional standards will be necessary to sustain the high quality of the professional teaching staff and eliminate the inflow of unqualified specialists to the industry.

   A high quality educational system will create globally competitive human potential. On the short-term horizon, the system will lose a portion of the created potential to other countries with more favorable conditions for professional self-realization. Nevertheless, such investments will provide returns quite quickly and the professional flow will soon become circular, since high quality human capital creates new economic opportunities.

---

THE LOGIC OF TRANSFORMING HIGHER EDUCATION

The transformation of higher education suggests more than a mere improvement of existing educational institutions. For real transformation, it is necessary to form leading institutions and integrate the world's best educational content with the internal educational platform.

Such objectives suggest a three-tier pyramid system, where the agents are the international educational segment, the local leading institutions, and the general “local” segment.

In the context of educational globalization, international educational programs in fact become a part of the domestic educational system. If an applicant chooses between the local and foreign universities, those two become competitors. Yet new online educational platforms (e.g., MOOC, or massive online open courses such as Coursera, Udacity, EdEx) directly become a part of a local education system. This segment will become a serious competitor for local institutions in the future, posing the challenge for them to provide world-class content. In this regard, it is important to create a leading educational sector that not only has the capacity to incorporate the best international technology and educational content and can provide new internationally competitive educational programs, but is also able to spread this throughout the system. Figuratively put, the role of leading institutions is to “translate” the best international content for the mass educational segment. The leading segment with its greater capacity in international exchanges, adaptation, and application of the best international programs can transmit the best experience across the entire system. The formation of the leading segment along with the creation of upward and downward linkages become a critical component for transforming higher education.

Ways to Approach Transformation

The transformation of higher education within the logic described above can occur in two possible ways. The first, differentiated approach assumes that the “educational pyramid” will be more pointed and hierarchical. The second, non-differentiated approach assumes a more “flat” pyramid structure.

The differentiated approach is based on the principle that with limited resources, it is vital to target the “critical pressure points” by focused interventions and spreading the results throughout the entire system. This approach puts emphasis on the creation of a small number of excellence centers that become the agents of change for the system. By creating an appropriate environment for learning and research, those centers are capable of attracting the best professional resources and receiving strong synergetic effects through that persistence. Such centers of excellence set out ambitious standards compatible with international best practices, which also become
achievable in the local environment. The success of the approach depends on the strength and effectiveness of the links created between the excellence centers and the rest of the sector.

The second, **non-differentiated** strategy implies a more balanced advancement in all parts of the educational system. Within the frame of this approach, the role of the “translator” is distributed among a much larger number of institutions and the best professional resources are more spread throughout the system. Moreover, this kind of distribution is intentionally encouraged.

For the effective implementation of any approach, the creation of a leading segment is logically one of the primary steps, as in order to be in tune with the internationally competitive educational system, it is necessary to have compatible elements incorporated within the local system. Otherwise, development targets would be quite abstract and intangible. The components of the leading segment may include training centers, research and innovation centers, laboratories, entrepreneurship centers, and full-scale universities.

An example in the high-tech sphere can be the creation of an innovation/educational center in collaboration with the best international universities. Such a center will allow the implementation of joint research projects, delivering courses with the engagement of top-level professionals, and the incorporation of digital content. Students from various universities can participate and receive credits when taking the courses offered by the center. A more fundamental execution of this approach is the creation of a leading technological university, with the potential to become one of the regional technological educational centers (for example, **Hong Kong University of Science and Technology** — HKUST).

Systemic improvements are vital, such as the integration of research and education (turning universities into educational research centers and eliminating the gap between science and higher education), international exchange programs, rating of universities, optimization of the number of universities and specialties, application of corporate governance principles in universities, and changes in the financing structure with emphasis on research grants, alumni contributions, and endowment funds.

**PROFESSIONAL TRAINING AND DEVELOPMENT INITIATIVES**

Professional development initiatives should be in line with Armenia’s strategic growth priorities and sectoral development strategies. Important principles need to be addressed in such initiatives:

- The initiatives need to be in tune with the strategic initiatives of priority sectors, addressing their developmental needs.

- The active contribution (including financial) of private companies is vital in order for companies within those sectors to take a more responsible approach to improving the challenges of education and carefully choosing the areas of educational investment.

Examples of professional development initiatives are the establishment of joint laboratories in universities, the incubation of start-up companies by the universities, the involvement of industry representatives in shaping university curricula and courses, internships, training and professional development programs as customized and requested by companies, and lifelong education opportunities for acquiring new qualifications and building deeply specialized capabilities.

In order to have such a collaborative model operating, it is necessary to have stimulating and supportive institutions. The public-private partnership in the form of co-financing by the government and the private sector is adopted in the sectoral strategies developed within the framework of the Export Led Industrial Policy of the Republic of Armenia. Those initiatives are supported by the Industrial Development Fund. In order to achieve the critical mass, it
is necessary to scale up successful programs by involving a large range of businesses and educational institutions.

**PROMOTION OF PROFESSIONAL REPATRIATION**

Repatriation is one way to fill the gap of qualified professional resources. It is the shortest path to bringing high-quality professional resources to Armenia, which can create new business opportunities within the country. Both Diaspora-based and local Armenians who have earned their higher education degrees or some work experience abroad can shape this stream. Unlike mass immigration, this kind of repatriation is small-scale, but it has a great potential to influence the country’s development.

The feasibility of this initiative is proven by the successful launch of Repat Armenia, a nonprofit organization that supports repatriates, particularly those in the mentioned category.

The key success factors for the existing challenges and limitations are:

- Targeting sectors and countries with the highest potential of repatriation and running a large-scale communications campaign on the professional opportunities in Armenia for those targets.
- Building awareness on opportunities to maintain high standards of life: recently established high-quality schools, children’s development centers, and cultural centers are offering favorable socio-cultural conditions for high-income professionals.
- Understanding the importance of preserving identity, which is a critical factor.
- Managing efficiently in force majeure conditions. The forced immigration flows due to political situations should be viewed as economic opportunities and met with the appropriate response (in the case of Syrian Armenians, this opportunity was partially used).

These efforts should result in transforming the “brain drain” into “brain circulation.”
4.4 CREATING A MULTIDIMENSIONAL FINANCIAL SYSTEM

**Agenda**

Diversifying and broadening sources of funding to corporate players in Armenia are critical components for driving further economic growth.

The current one-dimensional financial system stifles growth by failing to provide a wealth of financing instruments suited to the needs of different segments of companies. A healthy multidimensional financial system is critical for economic growth in Armenia to provide for the spectrum of short to long-term, debt, equity and quasi-equity instruments.

**Root causes to attack and strategic options**

<table>
<thead>
<tr>
<th>Causes to attack</th>
<th>Strategic options</th>
<th>Specific actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>High leverage of bankable medium-sized and large companies</td>
<td>Deleveraging overleveraged sector</td>
<td>Developing capital markets, equity and quasi-equity instruments</td>
</tr>
<tr>
<td>Low access to finance for most higher-risk MSMEs</td>
<td>Tailored funding mechanisms for higher-risk companies</td>
<td>Scaling up the government/donor-backed schemes, innovation finance, angel clubs</td>
</tr>
<tr>
<td>Low management quality of private sector (especially MSMEs)</td>
<td>Upgrade the governance and management systems</td>
<td>Quality and excellence standards, massive trainings and business support mechanisms</td>
</tr>
</tbody>
</table>

**DELEVERAGING OVERLEVERAGED SECTOR**

The relative maturity level of the banking system resulted in the rapidly growing leverage of “bankable” and potent companies in Armenia. Most of them have exhausted their debt absorption potential, maxing out the reasonable debt/equity levels. Further growth would require equity injection, for which Armenia’s financial system lacks the proper intermediation mechanisms.

Capital market development is the apparent strategic solution, but it cannot be an immediate fix to such a complex long-term development challenge. The interim solution could be the introduction of debt instruments that replicate or approximate cash flows of equity instruments. Thus, the issue would be addressed both in short-term and long-term perspectives.

- **Short-term intervention approach - introducing and expanding quasi-equity funding mechanisms.**

Given the challenges of equity markets in Armenia, debt instruments, having characteristics of equity instruments in terms of cash flows, but without ownership transfer implications and other
attributes of equity investments, would in fact help release the burden on current cash flows of leveraged corporate sectors and provide impetus for long-term investment activity. As interest rates are not the prime constraint for investment activity growth (as shown in the analysis above), these instruments will have intrinsically higher cost of capital, but would be better suited to finance expansion activities. Such financial instruments can be engineered in the form of primarily long-term debt (with longer than 8-10 year maturities) and accelerating payments towards the end of maturity dates or, in more “transparent cases,” as subordinated debt or mezzanine instruments. The current lack of such instruments in the market signals the need for the initial triggering through public policy measures. Significant resources provided by international development institutions can also be directed towards such products instead of plain vanilla debt instruments. Execution may start with the piloting of instruments at state-owned institutions such as SME Invest or Panarmenian Bank and then scaled up by larger capital infusion from international financial institutions to commercial banks. Such instruments should have a sharply focused nature, targeted at companies of priority economic sectors. The positive impact of such an initiative by publicly supported financial institutions and development finance will be two-fold:

- Trigger effect on financial system development: the initiative will decrease first mover disadvantages. The product will be mature enough for private financial institutions to start using once the initial market test is complete.
- Trigger expansionary effect on economic growth: companies prone to growth in the priority sectors will have a valid long-term source of additional growth/investment capital.

**Long-term intervention approach - Capital market development efforts.**

Capital market development requires efforts aimed at expanding both supply and demand for respective public market-based funding instruments. Sustainability and soundness of markets are particularly driven by the emergence of long-term finance such as equities and bonds with long maturities.

- In the near term the demand for capital market instruments will be driven by pension reform.

The introduction of the new funded pension system in 2014 has triggered controversial and strong reactions in the society. The debates concern mandatory contributions, its burden on current incomes of the population, the long-term nature of future benefits and other aspects of the reform that basically impose higher savings. With the prime goal to establish a radically new pension system it has its significant implications on the financial system in Armenia as well. It has the potential to foster activation in Armenia’s capital markets, by aggregating large amounts of savings and creating institutional demand for capital market instruments if the funds are diverted towards local market. The estimated size of pension funds available for investment for the first year of the reform is USD ~110 million and it is expected to reach USD 1 billion in 2018.

In addition to creating aggregate demand for capital market instruments, the pension reform has the potential to facilitate behavioral change among financial system agents towards more future oriented action. Extension of planning horizons can stimulate new mental models and practices in corporate management and financial strategies. Such behavioral change can contribute to financial intermediation and particularly, capital market, which is the most future oriented component of a financial system.

- Long-term target capital markets can be developed only due to a systemic approach and a critical subset of necessary steps.

Successful efforts shall form a critical mass of institutions, processes and players. No single success track exists, but some of the strategic moves outlined below may be considered to constitute the necessary nexus of initiatives to move the system.
- Gradual increase of transparent reporting and solid corporate governance in the corporate sector

The lack of trust towards local corporations is in part due to the lack of transparency in reporting and the divergence of official and real financials. A transparent and professional corporate governance is impossible without proper transparent financial reporting and the total elimination of the shadow from the economy. This issue has been addressed above.

As part of corporate governance development efforts, the establishment of an institute of licensed independent non-executive directors can be considered. Most local corporations do not comprehend the lack of non-executive directors, and that is partly due to the shortage of qualified professionals. Promotion of this practice can spur the understanding of the necessity and bring in fresh perspectives to corporate decision-making, thereby increasing corporate management quality.

A corporate rating system is necessary to promote corporate governance and transparency in Armenia. Rating agencies tend to decrease the information asymmetry problem between investors and insiders. Incentives (subsidized loans under industrial policy, repo transactions on corporate securities by CBA, etc.) can motivate companies towards higher transparency and attaining better ratings.

The rating system should be independent and provide reliable information to investors so they can make better decisions. Given the unaffordability of international rating services by the majority of corporations in Armenia, creating an independent local rating or subsidizing rating costs can be considered as an alternative.

- Tax incentives for going public

Tax incentives for issuing equity were implemented in many countries, with varying effects. In order to have a measurable impact, tax incentives should be substantial (up to full profit tax exemption for a few years) and occur in conjunction with other systemic complementary efforts. The tax saving effect may be comparable to “lost income” due to higher transparency.

Tax incentives were once exercised as a stand-alone action to promote IPOs in Armenia. The failure of this initiative is evidence that a system-based approach rather than a stand-alone action is necessary.

- Formation of a robust benchmark yield curve

Consistent public debt issuance focused on a few key maturities with transparent and realistic pricing will facilitate the formation of an effective benchmark yield curve. A benchmark yield curve serves as a reference for private issuers to price debt securities. Currently, the yield curve has gaps for medium and long-term maturities and fails to serve as a benchmark. The latest issuance of Eurobonds is a very important step towards setting benchmarks in foreign currencies and helping corporate issuers tap into foreign capital markets.

- Facilitating entry of private equity players

Private equity funds can serve as bridging institutions for companies moving towards going public. While the Law on Investment Funds provides a quite liberal regime for private equity funds, it is only a small precondition for triggering private equity markets. The government may facilitate the entry of PE players through matching funding and other incentives. PE vehicles that would target pre-IPO funding may have better chances of exits and potential to trigger capital market development.

- Private bond issuance guarantee mechanisms

The guarantee facilities can insure private bonds and thus offer investor protection against an issuer’s bankruptcy. A few pilot facilities available in the market (particularly a USAID-supported facility) can be enhanced by a smoother, less time-consuming mechanism. As a result companies
will be prompted to opt for bond financing instead of bank loans and reduce the risks for the buyers facilitating the development of the local currency bond market.

- Privatization of remaining large state assets

The primary effects of privatizing remaining state assets will be the increase of stock market capitalization and the number of listed companies. It will also generate interest toward IPO and increase capital financing awareness in the corporate sector. The recent sale of 20% of state shares in ARMRUSSGASPROM is a move in the opposite direction.

**TAILORED FUNDING MECHANISMS FOR HIGHER-RISK COMPANIES**

The bank centric financial system of Armenia is naturally risk averse, which results in a financing gap for companies with higher than bearable risk levels. Such companies are mainly MSMEs, ranging from newly starting businesses with no strong cash flow history to companies without sufficient or liquid assets for collateral purposes. This vulnerable sector of the economy is one of the most important growth engines, which is currently cut off from potential growth finance. The government of Armenia currently implements MSME-oriented support schemes, mainly channeled through SME DNC, Industrial Development Foundation and SME Invest UCO. Recently, an initiative of matching grants for high-tech companies was implemented for the first time. These instruments (state guarantees for micro loans, start-up finance in micro amounts, other instruments) currently serve only limited segments and are in limited volumes. MSME sector financing can be enhanced by scaling up these instruments. The scale up of development finance for such companies should have the following formats:

- State guarantees for small to medium-size loans in order to fill the collateral gap in the economy;
- Subordinated financing instruments for companies with higher leverage levels;
- Start-up financing for companies with no history but solid business potential;
- Innovation grants for high-growth technology-based startups.

**Angel associations can be a good platform to transfer investments to higher risk companies.**

The legacy of politico-economic developments in the country has resulted in a deep polarization of wealth: a certain portion of companies/shareholders enjoy continuous cash surplus, whereas others have low access to finance for working capital and growth capital purposes. Banks as the sole financial intermediators provide only limited intermediation services. Instruments for direct investment facilities are rarely executed, which is an entrepreneurial opportunity in the economy that still needs to be tapped. The cash surplus “pockets” of cash-rich agents can be matched to the growth finance needs of other corporations, SMEs and others.

Angel networks and clubs can act as such a platform. They operate mainly in more developed countries, channeling investments of high net worth individuals to starting businesses and investment projects. Business angels both in Armenia and the Diaspora are becoming increasingly more active. An undertaking to structure these efforts may have a considerable impact. Yet in their infancy crowd-funding platforms may become another powerful medium for intermediation.

**UPGRADE THE GOVERNANCE AND MANAGEMENT SYSTEMS**

Financial intermediation expansion cannot take place on a significant scale without the massive upgrade of management practices in the corporate sector. The current “asset-based” financing culture of the economy is partly the consequence of poor management levels of the corporate sector. Low transparency, low quality financial reporting, management decision-making and
organizational health of local companies impose serious distrust of investors and financial institutions.

The efforts need to be synchronized with government initiatives such as export promotion and an industrial growth policy. Businesses currently suffer from a serious managerial skill gap and talent deficiency. The initiatives can be synchronized with efforts aimed at developing professional skills as well as ensuring a level playing field and transparency described in previous sections in this report. The continuum of initiatives may cover the following areas:

- Customized trainings and mentorships for MSMEs;
- Business advisory co-financing initiatives;
- Management assessments and excellence quality standard promotion through awards, competitions;
- Recruiting and engaging professional managerial talent from the Diaspora through repatriation efforts.

4.5 BURNING PLATFORM

Limited opportunities due to significant constraints to growth, high rates of emigration, and increasing regional and global competition will inevitably shrink the “economic pie” in Armenia for everyone. The long-term viability of Armenia’s economic system requires radical transformation and creation of a level playing field for all economic agents. There is little doubt that this view is shared by all layers of society in Armenia including the power elites. In the long run a transformation of the competitive environment is beneficial for the majority of the Armenian economy’s stakeholders. However, in the short run the entrenched interests of groups that extract excessive rents from access to resources and dominant positions are the key bottlenecks to change. Incumbents always fear to be worse off due to change in existing rules of game and new ways of conducting business, as change is prone to destroying their leadership roles in the market. In this instance, Armenia is no different than the rest of the world. This fear creates an increasing tension in society. The recent frequent social protests, social activism, and “peripheral battles” between power elites are just a few symptoms.

The change will happen when a progressive group with a long-term agenda becomes the center of a wider coalition of change. The ability to translate long-term benefits to short-term ones for that elite group will be a key driving and motivational factor.
CONCLUDING REMARKS

The significance of sustaining robust economic growth in Armenia is immense as never before. The sluggish economic performance poses demographic and national security risks for the country. Armenia cannot further afford slow progress and high inertia in policy reforms. Focusing solely on quick growth fixes is no longer an option for the country.

Sustaining high economic growth rates needs to be accompanied by comprehensive structural adjustments in the economy, to offset the short term pressure on labor markets due to productivity increase. This is a complex process, requiring multitude of tradeoffs and hard decisions.

Effective management pressures to prioritize the development bottlenecks and focus on the *binding constraints* first. Our analysis identified four such constraints, which need immediate and effective actions for resolution.

**Insufficient quality of human capital:** sophisticated human capital can serve as a locomotive for both growth and structural changes in the economy. Enhancing quality of human capital and developing a new competitive skillset will be the key to structural transformations within the economy and flow of workforce from low productive to highly productive sectors.

**Distortions in competitive landscape:** The recovery of the competitive landscape and leveling the playing field for all businesses will foster entrepreneurship in Armenia. This will have a strong role in enhancing vital institutions, such as transparency, trust, secureness and property rights.

**Lack of self-discovery:** The growth prospects for Armenia are inevitably export led, whereas the weak foundations of self-discovery limits the potential opportunities. This is particularly vital in the context of the customs union membership, where Armenia needs to utilize the possible opportunities in the most efficient ways.

**One-dimensional financial system:** Efficient and diversified financial system will be necessary to fuel the growth in the country. The abundance of financial institutions and instruments is a necessity for fostering the sustainable long-term productivity growth and surging economic performance.

Such massive changes require effective and strong leadership in both public and private sectors and a collaborative effort to reinforce a non-zero-sum-game mentality.
## LIST OF ABBREVIATIONS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACR</td>
<td>National Competitiveness Report of Armenia</td>
</tr>
<tr>
<td>AMD</td>
<td>Armenian Dram</td>
</tr>
<tr>
<td>ANEL</td>
<td>Armenian National Engineering Laboratory</td>
</tr>
<tr>
<td>CAGR</td>
<td>Compound Average Growth Rate</td>
</tr>
<tr>
<td>CBA</td>
<td>Central Bank of Armenia</td>
</tr>
<tr>
<td>CEE</td>
<td>Central and Eastern Europe</td>
</tr>
<tr>
<td>CIS</td>
<td>Commonwealth of Independent States</td>
</tr>
<tr>
<td>DB</td>
<td>Doing Business</td>
</tr>
<tr>
<td>EBRD BEEPS</td>
<td>Business Environment and Enterprise Performance Survey by European Bank for Reconstruction and Development</td>
</tr>
<tr>
<td>EXPY</td>
<td>Export Sophistication</td>
</tr>
<tr>
<td>FDI</td>
<td>Foreign Direct Investment</td>
</tr>
<tr>
<td>GCR</td>
<td>Global Competitiveness Report</td>
</tr>
<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
</tr>
<tr>
<td>GFCF</td>
<td>Gross Fixed Capital Formation</td>
</tr>
<tr>
<td>HKUST</td>
<td>Hong Kong University of Science and Technology</td>
</tr>
<tr>
<td>HR</td>
<td>Human Resources</td>
</tr>
<tr>
<td>HS</td>
<td>Harmonized System</td>
</tr>
<tr>
<td>ICT</td>
<td>Information and Communication Technologies</td>
</tr>
<tr>
<td>IFI</td>
<td>International Financial Institution</td>
</tr>
<tr>
<td>ILO</td>
<td>International Labor Organization</td>
</tr>
<tr>
<td>IPO</td>
<td>Initial Public Offering</td>
</tr>
<tr>
<td>ISCED</td>
<td>International Standard Classification of Education</td>
</tr>
<tr>
<td>ITU</td>
<td>International Telecommunication Unit</td>
</tr>
<tr>
<td>LAC</td>
<td>Latin America and Caribbean</td>
</tr>
<tr>
<td>MNC</td>
<td>Multinational Corporation</td>
</tr>
<tr>
<td>MOOC</td>
<td>Massive Online Open Courses</td>
</tr>
<tr>
<td>MSME</td>
<td>Micro, Small and Medium Enterprises</td>
</tr>
<tr>
<td>OECD</td>
<td>The Organisation for Economic Cooperation and Development</td>
</tr>
<tr>
<td>NSS</td>
<td>National Statistical Service of Armenia</td>
</tr>
<tr>
<td>NPL</td>
<td>Non-performing Loan</td>
</tr>
<tr>
<td>PCT</td>
<td>Patent Cooperation Treaty</td>
</tr>
<tr>
<td>PE</td>
<td>Private Equity</td>
</tr>
<tr>
<td>PPP</td>
<td>Purchasing Power Parity</td>
</tr>
<tr>
<td>PRODY</td>
<td>Revealed Sophistication of Products</td>
</tr>
<tr>
<td>PSRC</td>
<td>RA Public Services Regulatory Commission</td>
</tr>
<tr>
<td>RA</td>
<td>Republic of Armenia</td>
</tr>
<tr>
<td>RCA</td>
<td>Revealed Comparative Advantage</td>
</tr>
<tr>
<td>SME</td>
<td>Small and Medium Enterprises</td>
</tr>
<tr>
<td>SME DNC</td>
<td>Small and Medium Entrepreneurship Development National Center</td>
</tr>
<tr>
<td>SME Invest</td>
<td>“SME Investments” Universal Credit Organization</td>
</tr>
<tr>
<td>STEP</td>
<td>Science &amp; Technology Entrepreneurship Program</td>
</tr>
<tr>
<td>TSE</td>
<td>Target State of the Economy</td>
</tr>
<tr>
<td>UN Comtrade database</td>
<td>The United Nations Commodity Trade Database</td>
</tr>
<tr>
<td>UNCTAD</td>
<td>The United Nations Conference on Trade and Development</td>
</tr>
<tr>
<td>UNFPA</td>
<td>The United Nations Population Fund</td>
</tr>
<tr>
<td>USAID</td>
<td>U.S. Agency for International Development</td>
</tr>
<tr>
<td>USD</td>
<td>US Dollar</td>
</tr>
<tr>
<td>VAT</td>
<td>Value Added Tax</td>
</tr>
<tr>
<td>WB GFDD</td>
<td>World Bank Global Financial Development Database</td>
</tr>
<tr>
<td>WB WDI</td>
<td>World Bank, World Development Indicators</td>
</tr>
<tr>
<td>WIR</td>
<td>World Investment Report</td>
</tr>
<tr>
<td>YSU</td>
<td>Yerevan State University</td>
</tr>
</tbody>
</table>
REFERENCE LIST

ARKA news agency. “Performance Indicators of Armenian Banks”, series
Central Bank of Armenia
Customs Service of the Republic of Armenia
Elgin C., Oztunal O., “Shadow Economies around the World: Model Based Estimates”
Employer Survey, EV Consulting, 2011
Eurostat
Gërçhani K., “Informal Sector in Developed and Less Developed Countries: A Literature Survey”
Global Competitiveness Report, series
Household Survey by National Statistical Service of Armenia, series
International Labor Organization
International Monetary Fund
International Telecommunication Unit


Martin W., Mitra D. “Productivity Growth and Convergence in Agriculture and Manufacturing” McKinsey Global Institute


Nasdaq-OMX Armenia

National Competitiveness Report of Armenia, Economy and Values Research Center, EV Consulting, series

National Statistical Service of Armenia

Organisation for Economic Cooperation and Development


Republic of Armenia Ministry of Economy

Republic of Armenia Ministry of Finance

Republic of Armenia Public Services Regulatory Commission


State Commission for the Protection of Economic Competition of the Republic of Armenia

Student Tracer Study by EV Consulting. survey of graduates, 2011

The United Nations Conference on Trade and Development Statistics


United Nations Commodity Trade Database

United Nations Department of Economic and Social Affairs

United States Agency for International Development Pension and Labor Market Reform Project


World Bank, Doing Business report, series

World Bank, Financial Development Database


World Bank, World Development Indicators Database

World Economic Forum

World Investment Report, series

The National Competitiveness Report of Armenia was developed by EV Consulting and Economy and Values Research Center. EV Consulting is a management advisory firm that serves companies and industries aspiring to move to the next level of competitiveness and innovativeness.

EV Research Center is EV Consulting’s research arm focused on studying competitiveness. EV is a Partner Institute of the Global Competitiveness and Benchmarking Network of the World Economic Forum.