

MANAGEMENT TOOLS



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“Jazz”
100x75cm
Oil on canvas
2004
Suren A. SAFARYAN

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However, statistics indicates that growth is to a large extent conditioned with high global prices for resources. With further increase of private transfers and local demand, Armenia may retake to the needle of private transfers and continue sinking in import dependence. This hints that policymakers should stay alerted and proactive to foster export-oriented growth in Armenia.



Dear reader,

In the world of toughening competition efficiency and competitiveness become a governing factor for a company's success. In Armenia, with its infrastructural and market limitations, the ability to compete on regional level becomes even more vital for local companies. However, there is hardly a way to succeed unless Armenian companies arm with effective management systems.

The second issue of the EV Periodical is devoted to the management systems. Our goal is to share with you some of our experience and knowledge in this area.

First, we present the main conclusions of the survey carried out among Armenian companies to reveal awareness and popularity of various management tools in the local environment. We then present one of the tools which has a practice-based proven effectiveness in the world and increasingly in Armenia – the Balanced Scorecard, as well as provide with a snapshot of how EV can help Armenian companies to implement this tool. An interview with Ralf Yirikian, the General Manager of VivaCell-MTS – perhaps a company with one of the most sophisticated management systems in Armenia – captures yet another look at effective management practices in Armenia.

This issue is intended to provoke a retrospective look at the performance of business in Armenia and draw managers' attention to the opportunities ahead. Hence, EV would be happy to further get your ideas, problems and suggestions shared with us.

With best regards,

Manuk Hergnyan

Managing Partner, EV Consulting cjsc

Chairman, Economy and Values Research Center (EV)

THE HIDDEN RESOURCE OF MANAGEMENT EFFICIENCY

Management is undoubtedly one of the most important professions of humankind. The full potential of management as a hidden resource of business growth is yet to be fully appreciated by local companies.

The leading and “opinion forming” executives of many international companies viewed the economic crisis as an opportunity to rethink their management approaches and become even more efficient. This shows the critical trait of best practice in management – seeing challenges as opportunities for further growth and development.

Armenia scored 117th in the Global Competitiveness Report's rankings (2010) on professional management out of 139 countries. The score denotes that the level of reliance on professional management in the country is rather low: it is yet to higher extent the relatives and friends that are positioned in higher management positions in local companies.

The management is yet not regarded as a profession by itself and management by intuition is the main approach adopted by most of the company executives.

However, as the era of chaotic business doing is close to exhaustion, it is the right time to turn to the best practice management approaches for Armenian companies.

Chaotic – as it was the first phase of business formation, where management was just a function to be carried out and the importance of it was rather low. Along with the growing business sophistication of local companies, the understanding of the need for professional management is also emerging. The latest trend is the intensified search for qualified managers, which turn out to be “the scarce resource” of our times... Hopefully, the healthy demand will facilitate the growth of professional managers in Armenia too.

While people are the essential part of professional management, the tools they use are of no less importance. The management practice is constantly in process of improving the available management tools and developing new ones, the need for which emerges with time. According to the annual survey of companies carried out by Bain&Company, the average number of management tools used by companies worldwide is about 10.¹

The knowledge and usage of such tools is a sound indicator of business sophistication of the country. The similar survey carried out by EV Consulting among 54 companies operating in various sectors in Armenia showed contradictory results. According to executives the companies use on average 7 management tools, which is still below the global average, however higher than conventional wisdom would expect.

Judging from our experience, we believe that the results we have received are inflated: the “claimed” rates of management tools seem to be higher than the realistic levels. The real essence of the tools seems to be not very well comprehended, which can be one of the causes of inflated results. This can be an indication of a rising need (or desire), which has not yet fully converted into a well comprehended and rationally substantiated demand.

¹ See Darrell Rigby and Barbara Bilodeau, “Management Tools and Trends 2009,” Bain & Company, Inc., 2009.

The management tools, ranked by their popularity in Armenian companies, are as follows:

Management Tools	Rate of usage in companies
Strategic Planning	80%
Budgeting	72%
Benchmarking	59%
Mission and Vision Statements	59%
Outsourcing	59%
Customer Relationship Management	57%
Customer Segmentation	56%
ISO / Quality management	48%
Scenario and Contingency Planning	43%
Strategic Alliances	39%
Business Process Reengineering	35%
Supply Chain Management	35%
Balanced Scorecard	31%
KPIs	28%
Mergers and Acquisitions	9%
Lean Six Sigma	6%

The most popular tools

The usage rate of these tools surpasses that of the rest by more than about 10 percentage points. As these tools are the ones more straightforward for usage, it is natural to have more companies having adopted the planning and budgeting processes in their management practices.

These tools are especially vital during the periods of economic crisis, when the cost cutting and downsizing were the popular tools of most companies globally. Although, the most forward looking management thinking pushes the agenda of abolishing the budgets whatsoever (see Jeremy Hope and Robin Frazer, "Who Needs Budgets?" Harvard Business Review 81(February 2003)), however – Armenian companies do need to yet go through the cycle of having a developed and mature budgeting process. As paradoxical as it may sound – the budgeting process will become outdated only after having become mature enough. True, budgeting process is rather rigid and budgets become obsolete not very long after they are approved. However, the value of the budgeting process is far more than the document it produces: it is the central planning process, which gathers all management on one table to think about the future of the company.

The prolongation of the budgeting horizon – is the main trend seen in local companies that will come as the next development level in management practice.

One of the trendiest tools

The rising popularity of CRM is inevitable in local companies. This is to indicate the shift of Armenian companies from being "production oriented" to becoming "customer oriented". Some confusion exists over understanding what is truly meant by CRM – the software? the work approach? the way processes are organized? This confusion is of course not an Armenian phenomenon and CRM is quite often mistakenly identified as just the software in most companies internationally too. There is more to CRM than the software. The relationship marketing is all about creating **intimate relations** with customers, first by gathering information about their consumption patterns, needs and wants and then by transforming that knowledge into tailored products. CRM systems are easier understood and more vastly used in service companies, and naturally banking and telecom industries seem to be the forerunners of the management tool usage in Armenia. Other industries are expected not to let us wait for long.

One of the least understood tools

Balanced scorecard is among the tools that has indicated rather low usage rate among the surveyed executives. Even this rate seems not realistic and indicates the low level of understanding of the tool. One of the indications is that KPIs as a separate tool are of lower usage than the Balanced Scorecard itself. Whereas, this cannot be possibly realistic, as balanced scorecard includes a system of performance measures or KPIs.

The next article of the Periodical is devoted to the Balanced Scorecard with the purpose of increasing the level of understanding of the tool so popular among international companies.

MANAGEMENT TOOLS

Interview with VivaCell-MTS General Manager Mr. Ralph Yirikian



VivaCell-MTS, by various standards, possesses leading positions in Armenia which testifies about the existence of substantial and advanced management system. In this context, the Company's experience is extensively valuable which we asked VivaCell-MTS General Manager Mr. Ralph Yirikian to kindly share with us.

What were the major challenges faced by VivaCell-MTS in the establishment phase? What main development stages has the Company passed through?

Quality labor force recruitment has probably been the most crucial challenge. The main dilemma was whether to recruit foreign or local specialists. The critical issue with the foreign workforce would have been their unawareness of the local environment even with the possession of international experience.

I believe that an employee should comprehend the work environment very well, along with the local traditions, mentality, socio-economic situation and market segmentation. Thus, from the very first day onwards, VivaCell-MTS made a decision to trust local specialists, particularly, recent graduates. We needed to create a young workforce and teach them a new and unique work style, novel thinking and approaches, which were not yet formed in Armenia by then.

Now, we are very happy and proud that VivaCell-MTS is in leading positions in the telecommunications market not only in terms of technology and innovation but also by the management culture. Since the very beginning we have designed such a culture where our employees are not merely the staff of the Company, but also members of the family. Together we strive to nurture and strengthen our family. Our family has been built on several pillars of core values. From the start, VivaCell-MTS has endeavored to use these values on every step at work. This is implemented on all levels from the lowest position to the highest, i.e. the General Manager.

Our management culture rejects the 'seal-led' management thinking. Management is not limited to mere instructions or signing orders. The foremost essence of management is to serve an example to others. It starts from the General Manager's position and is spread on to the other employees, who should always look up and follow.

Initially, VivaCell-MTS had just one family member – myself. Afterwards, the Company expanded, and nowadays, our family consists of around 1,200 members. Certainly, VivaCell-MTS underwent a variety of changes. We have done considerable work on our internal systems and procedures with them being improved and new ones being formed. Generally, the economy, the market and the socio-economic situation are constantly subject to changes. Hence, our internal regulations should always comply with those developments. At VivaCell-MTS everyone knows that it is necessary to be flexible and ready to changes.

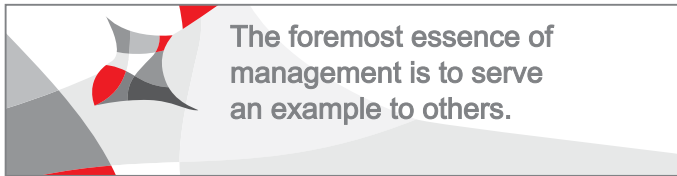
How did the change among the shareholders reflect on the corporate management system?

Previously, VivaCell-MTS had one shareholder. When the shareholder structure changed, two differing schools of thinking emerged represented by two entities. The largest shareholder, MTS Group typifies the Russian/Eastern European mentality. The other, with fewer shares, represents the Lebanese, Middle Eastern and Western mentalities. Hence, the mindsets of two continents were merged giving birth to the rich mix on the basis of which our experience was extensively enriched. The latter enabled us to review our internal procedures, develop business processes and strategic thinking.

Annual strategic business planning, currently, is embedded at VivaCell-MTS. The first phase for the following 3-4 years is the strategy design. This is followed by our next management tool, i.e. business planning, followed by budgeting. Via the use of another management tool, each quarter we analyze and evaluate our previous forecasts. In parallel, the Company compares its revenues year-on-year or benchmarks with the previous year's budget. Herein, costs and other Key Performance Indicators (KPIs) are juxtaposed.

Apart from the aforementioned, there is a range of some other tools used to add to efficiency. Thus, VivaCell-MTS has a few working KPIs, via which we can measure the performance of our family members in the framework of the corporate strategy, business planning and budget.

Recently, we have come up with another interesting tool – the cross-functional KPIs. Collective performance indicators are set for various areas, aiming for the creation of shared responsibility. The latter will facilitate everyone to know that he/she is part of the implementation of the overall Company strategy. There are also other tools that we use, such as the annual performance appraisal.



Are there any variations among management systems on different corporate levels?

There is a management alliance on MTS Group level, where VivaCell-MTS harmonizes certain strategic directions with MTS Group's general strategic philosophy. On VivaCell-MTS level, once a year we evaluate the staff performance. A quarterly bonus plan assessment is in use according to which the Company needs to achieve certain KPIs stated in the budget by the quarter end to enable our family members get bonus payments. There are also functional KPIs related to a specific functional strategy. And finally, we use personal KPIs.

KPIs are more complex on the executive levels and are gradually moderated with regard to the departments', units' and sections' heads. If the Company achieves the most important budget indicators, i.e. revenues, expenditures, etc., a certain portion of the bonus is already secured. For the workforce on the lowest levels, this implies a nearly full bonus fulfillment.

Each year with a new budget, VivaCell-MTS considers possible changes in the framework of corporate functional strategy. However, all the above-mentioned are just processes and instruments, and are not sufficient, if the Company management does not serve as an example for all corporate levels. Management denotes constant quest for changes. Any company must always be aware of latest developments in the sphere of corporate culture around the world.

How do you provide that cognizance?

Various conferences are held, where new management tools are discussed and presented. The latter are also offered by specialized consulting companies. In addition, the experience of foreign successful companies can be followed. In this context, the Company's management's attention to the corporate core, i.e. the labor force is vital. Regardless of the tools and approaches put into practice, no company can succeed without taking into account the role of the workforce. It can be claimed that VivaCell-MTS has thrived not for the reason of the General Manager possessing exceptional skills but rather thanks to the staff. Our employees have always been in the focus of the Company's attention, and, mutually, they have placed VivaCell-MTS in their focus of attention.

Nowadays, the number of management tools continuously grows. How do you maintain a balance between using too few and too many tools? Is there a specific central tool or platform that assembles everything and enables more systematic use?

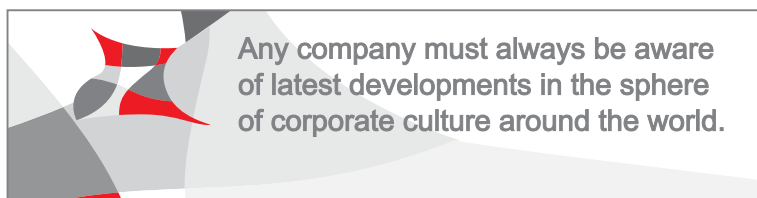
In international practice, the emergence of new management tools is frequently intended solely for commercial purposes. Therefore, the companies and, especially, the executives should always be alert. They should not necessarily adopt all the available tools. Particular environment, traditions and the local mentality should be born in mind. In addition, the tools must be refined to a certain extent. Here, flexibility plays an essential role. The Company must be prepared to undergo changes if necessary. Nonetheless, the latter must be rendered properly to the workforce, not hastily or forcibly. Generally, the management should be the main initiator of the changes.

I believe that work and human core values are the most important. In the Company environment they act as catalysts and maintain our family members' productivity. VivaCell-MTS has 11 core values which jointly represent a fundamental asset, namely respect. Sadly, these days, it is largely absent in the public and private companies in Armenia. Our corporate culture believes that employees on all levels are equal in everything apart from responsibility.

Mr. Yirikian, you made quite valuable observations on the incessant changes in management tools worldwide. Did the latest global economic crisis give rise to definite changes? Virtually all companies modified their range of management tools – did it also touch VivaCell-MTS?

Undoubtedly, the crisis impacted everyone. VivaCell-MTS undertook some measures to ensure that the pre-determined budget targets are attained throughout the recession. Prior to taking any steps, the Company management held internal meetings with its workforce and provided some clarifications, presented some comparisons. Afterwards, VivaCell-MTS launched the implementation of certain measures to get to 'safe haven'. Overall, cost-cutting was the main measure taken those days.

Most companies primarily think of workforce reduction during crisis, however, this was not the case at VivaCell-MTS. We kept all our employees as the latter are our most valuable asset. Nevertheless, we told them not to anticipate salary rise at the end of the year but just bonuses. In this way, VivaCell-MTS managed to save some funds and maintain the bonus system which is the cornerstone of the motivational system. We considerably reduced the marketing and operational expenses. We started to be more cautious in our procurement policy. All this was intended to preserve our profitability on the same level or even enlarge it as pre-planned in our budget.



Mr. Yirikian, how do you manage to align the Company's daily operations with the long-term strategy? For many companies execution is a significant issue.

Our strategy lies in what we want to achieve throughout the working year. VivaCell-MTS defines certain aspects in its general strategy, for instance, to boost the number of subscribers, to increase its share in the internet usage market, etc. The execution methods of all these become our sub-strategy directions, which in their turn act as functional strategies for some departments. In this way, several areas are bonded with each other, and a number of KPIs are defined, which contribute to the fulfillment of the broad strategic goals.

Generally, KPI is not set spontaneously. The KPI of VivaCell-MTS General Manager is set by MTS Group corporate center. Nonetheless, prior to the final decision, there is a KPI list from where it is possible to choose. VivaCell-MTS does the same for its department and unit heads.

Mr. Yirikian, what role is entitled to leadership in the effective management of a company?

Lead by example. This approach is the most transparent and accurate.

Interview by



Sona
Grigoryan



Hovhannes
Atabekyan

and

INTRODUCING BALANCE SCORECARD



The majority of Armenian companies are as young as 15 years old and less. Alike humans – this is the crucial age for formation of the further growth path. The age, when the companies need to make tough choices: whether to transform to professionally managed companies by instituting sound management systems or to continue to operate based on intuitive management, as natural to all emerging market companies.

This, by no means, is not to say that all companies lack the professional management approach in Armenia. There are many best performers that are the leaders in their sector and the major share of their success can be attributed to their timely realization of the need for professional management tools. However, there is still the vast majority of companies that is on the edge of that understanding. A lot depends on their ability to quickly learn and adapt to the future complications in the management of their company in order to stay competitive.

On top of all the “regular” difficulties of management, many Armenian companies are “blessed” with the dual accounting and all the mess that it implies. For example, the majority of local companies will have several answers to the question on what their profit was, not talking about more sophisticated financial indicators...

Having to operate in an “emerging” messy environment like this, the importance of having a sound management system is ever more substantial.

In search for tools to support the challenges of management - turning to international best practice can be of valuable use. The Balanced scorecard is one of those tools developed based on the rich experience of the international companies and evolved to become a comprehensive management system over time.

The Balanced Scorecard, a management system that is used by many leading companies worldwide (Microsoft, Marriot, Volkswagen, HSBC international branches, to name a few), can be as efficiently adopted by local companies.

The Balanced Scorecard, developed in early 1990s, was first introduced as a performance measurement system. It gradually evolved to become a management system that can serve as an integrating platform for the numerous management tools used within a company.

More than 50% of the companies surveyed by Bain&Company worldwide have introduced balanced scorecard system.¹

The Balanced Scorecard is essentially a strategy execution system. It provides with clear links of operations to company strategy that are measurable and have a distinct set of underlying initiatives to be carried out in order to achieve the targets set by the company.

The main components of the Balanced Scorecard can be seen in the exhibit:

Exhibit 1.
The components of the Balanced Scorecard

	Objectives	Measures	Targets			Initiatives
			y1	y2	y3	
Financial	Maximize growth	Revenue growth	20%	15%	10%	
	Maximize profitability	Net profit margin	5%	7%	10%	
Customers	Increase customer loyalty	NPS (net promoter score)	80%	85%	90%	Customer loyalty program
Internal processes	Efficient and optimized processes	% rework	5%	4%	3%	Quality inspection program
Learning and Growth	Motivated and strategy driven employees	Organizational engagement index	70%	80%	90%	Staff motivational programs

A simple approach of this provides the executives with a hands on tool for the executives for performance management and strategy execution.

The methodology of the Balanced Scorecard implies developing the performance measures with cause and effect linkages to support strategic objectives of the company. Thus, the performance management system of the company is put in a framework that allows seeing a holistic picture. Whereas, having a set of KPI-s for each functional unit makes it difficult to get a holistic view and understand, where exactly the problems arise.

¹ See Darrell Rigby and Barbara Bilodeau, "Management Tools and Trends 2009," Bain & Company, Inc., 2009.


The Balanced Scorecard as a management system provides a framework for the whole cycle of company management – starting from strategy development, planning the strategy and aligning the company, to the final stage of monitoring and review.

Balanced scorecard provides a balance on several perspectives of the company's operations. It helps to balance the company's long term objectives with the short term operations, the external forces (customers, market, etc) – and the internal forces (employees, etc), the financial measures (of more objective nature) – and the qualitative and other measures (of more subjective nature).

Focusing only on financial metrics can be misleading

Measuring performance only based on financial indicators is as bad as managing an airplane based on one indicator only.²

It can divert the management's attention to misleading direction, who will, as a consequence, fail to detect the real “health” issues of the company.



Experience highlight from Armenian reality – on financial metrics alone being not sufficient

The management was so happy with the rising revenue and profit figures that loosened the tight belts of the cost policy, especially in the area of bonus payments to employees. The management hoped that the higher salaries and bonus payments would accelerate the company's growth by motivating employees. However, being not linked to the performance metrics and failing to monitor the deteriorating customer satisfaction with the products, the higher pay did poor job on motivation – instead it just inflated the costs of the company squeezing the profit margins down with no material impact on revenue growth at all. As this was only reflected on the financial results of the company's next year's financial reporting – it was rather late when the shareholders and the management decided to take action.

The **Balanced Scorecard supplemented traditional financial measures** with criteria that measure performance from three additional perspectives - those of customers, internal business processes, and learning and growth. It therefore enables companies to track financial results while simultaneously monitoring progress in building the capabilities and acquiring the intangible assets they would need for future growth.

In other words, the Balanced Scorecard enables to focus the management's attention to measures that drive the performance of the company. This way the management is better positioned to make decisions on performance improvement for better financial results of the company.

² See Robert Kaplan and David Norton, The Balanced Scorecard: Translating Strategy into Action, (Harvard Business Press, 1996), p. 1.

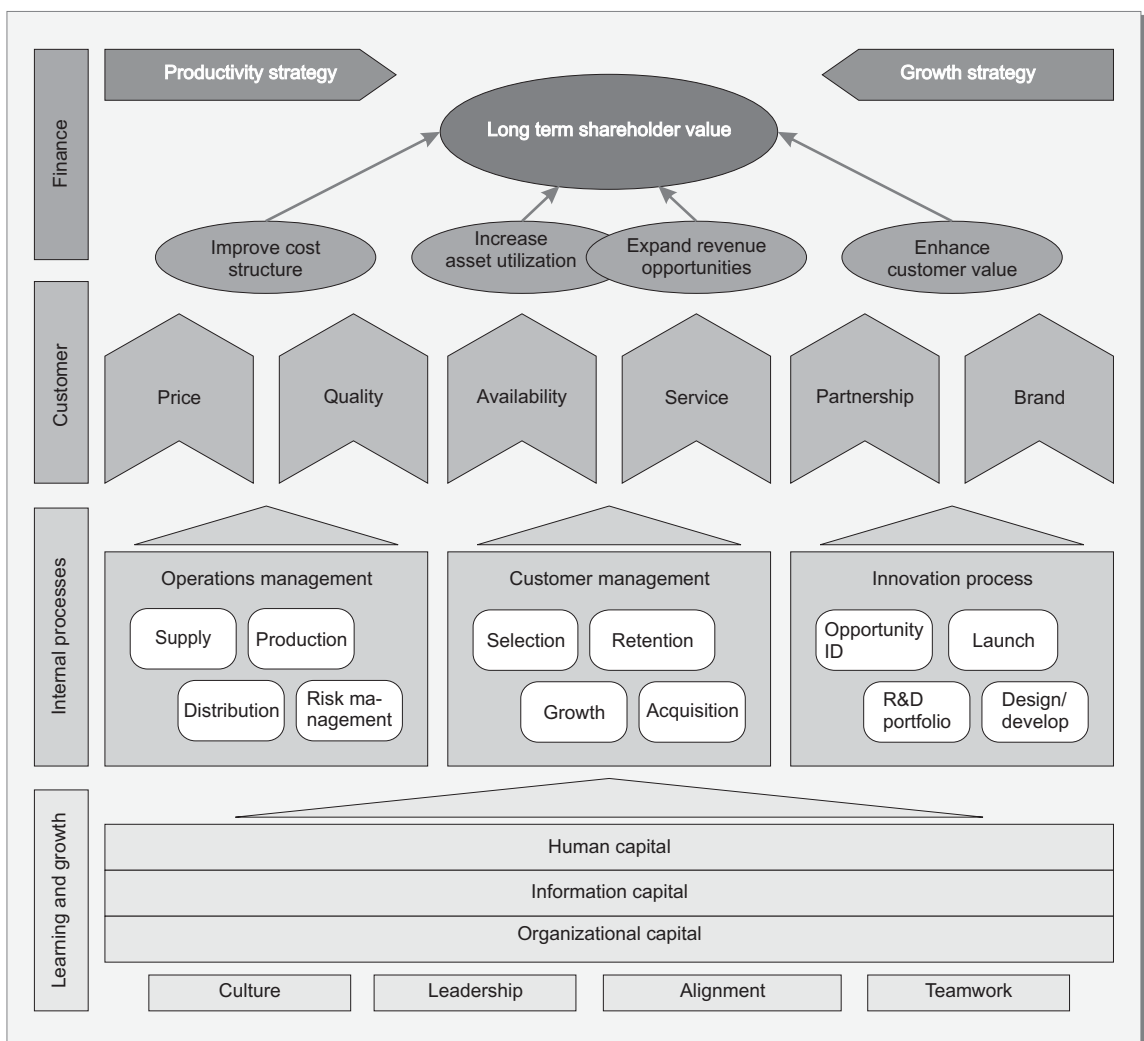
Briefly summarized, balanced scorecards tell you the knowledge, skills, and systems that your employees will need (their learning and growth) to innovate and build the right strategic capabilities and efficiencies (the internal processes) that deliver specific value to the market (the customers), which will eventually lead to higher shareholder value (the financials).

Balanced scorecard includes a convenient toolbox

Among those are the strategic initiatives. These are all projects linked to strategic measures and objectives, and all linked to company budget with a dedicated expense line that can be referred to as stratex (strategic expenses).

Strategy maps are one of the key concepts introduced by the Balanced Scorecard methodology. These are designed to present the company strategy on one page in a form of linked objectives. Each of these objectives is then assigned a performance metric or a KPI to assess its achievement.

Exhibit 2.
A strategy map



Strategy maps show the cause-and-effect links by which specific improvements in the lower levels create desired outcomes in the higher ones. The map has a roof structure, with the higher strategic objectives supported by the lower standing objectives.



Experience highlight from Armenian reality on the strategy execution difficulties

The marketing department of the company used to carry out an extensive competitive analysis, compile a comprehensive one year strategy document, which although without a long-term focus, however was a rather “serious” document. The document used to be discussed and approved by the management of the company at the end of the year and generally was never referred to throughout the next year ever again as the real life changes were hard to be included in the document and were even meaningless to do so. Thus, the strategy of the company, the development of which was a rather resource intensive undertaking -was most often left unexecuted.

The shift of the strategy documentation to one page strategy map radically changed the situation: the document was easy to communicate and to execute, as the linkages with everyday operations were clearly marked, in addition – the document was easy and flexible to adjust to real life change needs of the company.

Most companies implement their first balanced scorecard not with the intention of developing a new strategic management system. However, as the experience suggests, by building the scorecard, the senior executives start a process of change that goes well beyond the original idea of simply broadening the company's performance measures.

By developing a tailored management system with the Balanced Scorecard methodology, the managers will obtain tools necessary for setting clear strategic goals, planning and allocating resources, monitoring and timely spotting the problems arising, and updating and improving, where necessary. The Balanced Scorecard allows to balance all major aspects of the company, most importantly - the long-term development strategy and the daily operations.

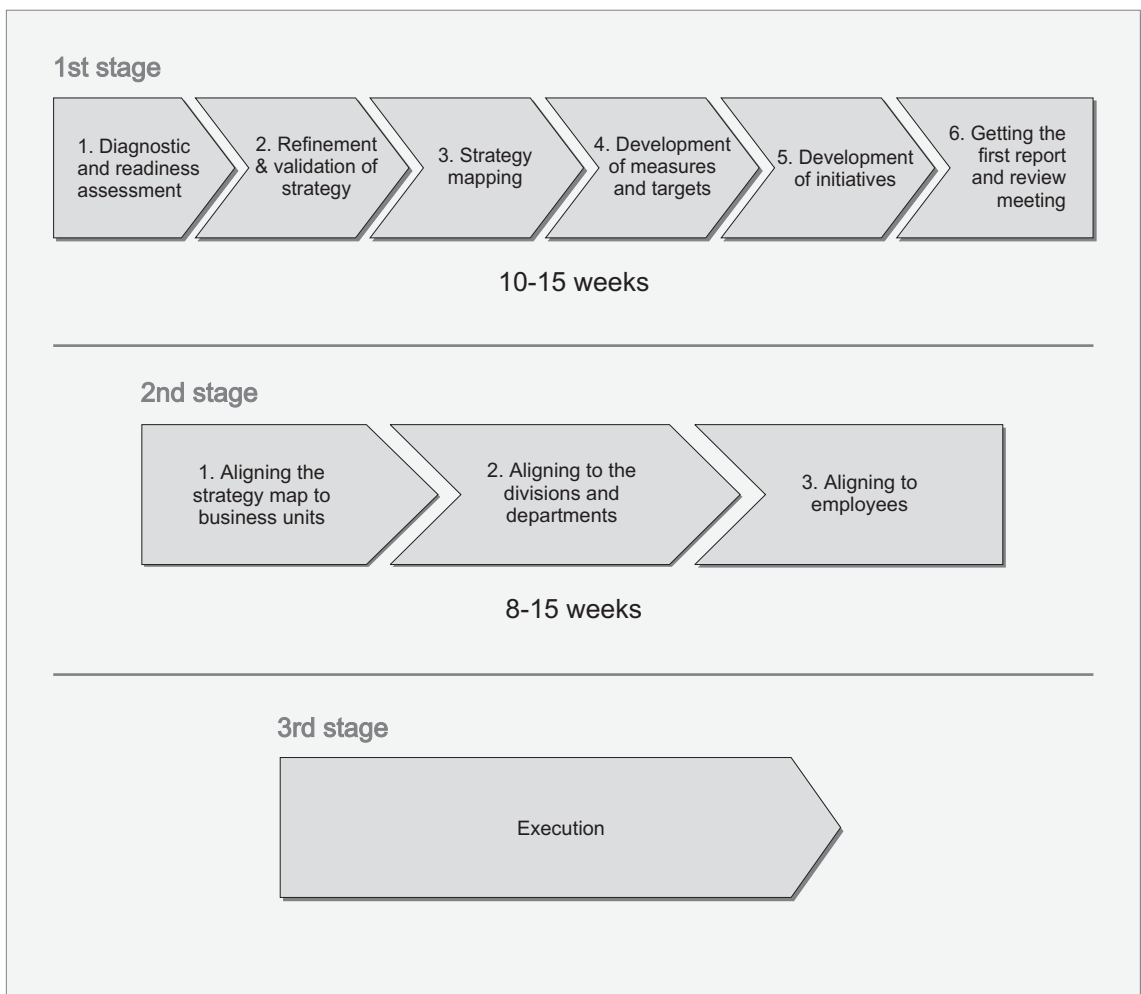
EV SOLUTIONS

Balanced Scorecard Implementation

EV Consulting has gained the knowledge and expertise on the practice directly from the Palladium Group, founded by the creators of the methodology - Drs. Kaplan and Norton. EV Consulting's Managing Partner Manuk Hergnyan has been granted a Kaplan & Norton Balanced Scorecard certification.

EV's experience in the area started in manufacturing and spanned into financial services industry. EV has developed a comprehensive set of facilitation services which helps companies on their way to implement the Balanced Scorecard. Through a series of workshops and hands-in support activities, EV ensures that the implementation process runs relevantly.

The Balanced Scorecard implementation process



 Stage 1

The first stage of the implementation process starts with readiness assessment. Once we are sure your company is ready for the implementation, a challenging and fruitful process of strategy refinement and validation is launched. This entails in developing strategy map, relevant measures, as well as planning the underlying initiatives and resource allocation.

EV coaches the process and our consultants closely work with the client team to ensure process runs adequately and with relevant deliveries.

 Stage 2

The second stage is dedicated to alignment of the entire company to the new strategy. The holistic stance is secured via cascading the strategy to the different business units and divisions as well as the employees. Yet another 8-15 weeks of intensive commitment ensures the successful completion of this stage.

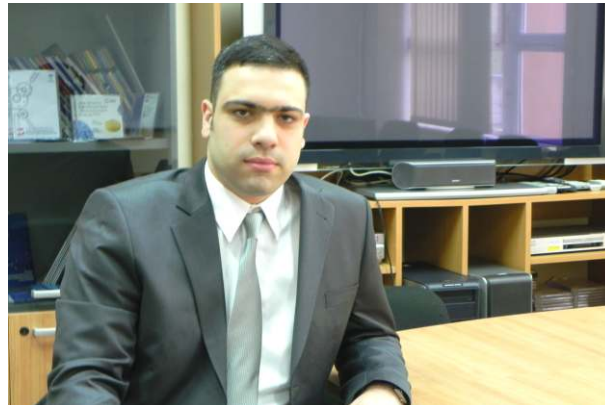
EV stays beside you with advice and facilitation when and where necessary.

 Stage 3

Questioning and challenging the strategy, and adapting it if necessary becomes effectively ingrained into corporate fabric.

With processes growing mature enough and your company having developed the essential competences, your team becomes ready to execute the strategy with an effective tool at hand. Incremental consultations with EV always remain as an option.

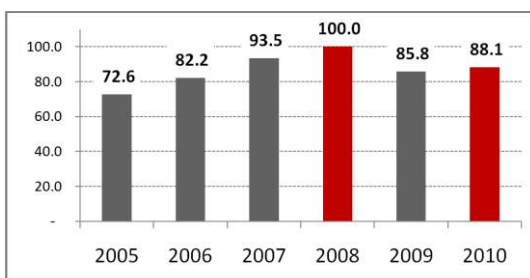
CONTOURS OF ARMENIA'S ECONOMY IN 2010: MINING DRIVES GROWTH



OVERVIEW

Year 2010 was a year of slow revivification after the plummeting decline in 2009. GDP growth comprised 2.6%¹ approaching AMD 3,510 bln (USD 9,394 mln). For the first time in the last 6 years the growing trend of import/export ratio was reversed, while budget deficit level (as % from GDP) decreased after peaking in 2009. However, high inflation and severe decrease in agriculture were major challenges for the economy in 2010.

Exhibit 1.
Armenia's GDP trend, 2008 = 100



Source: NSS

Note: 2008 GDP in constant 2007 prices.

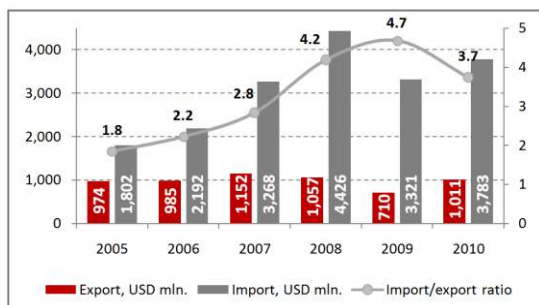
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Since 2005 the Armenian economy has been sinking towards import-dependence with imports growing faster than exports. 2010 seems to be a breakthrough sowing seeds of hope that Armenian economy is on its way

¹ Note: All NSS data for 2010 are preliminary and subject to corrections over time.

to lessen the dependence on imports. Overall, the imports grew by 14% and attained level of USD 3.8 bln., while exports recorded as high as 42.5% growth- slightly surpassing USD 1 bln.

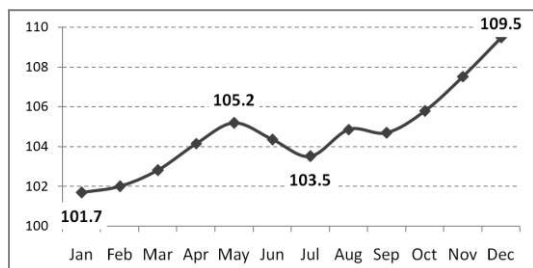
Exhibit 2.
Armenian import and export trends



Source: NSS

Inflation grew throughout the year. A sharp increase wave launched in October and drove the CPI to a cumulative 9.5% growth which entailed in an increased social tension.

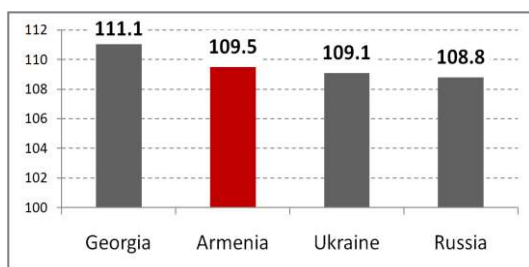
Exhibit 3.
CPI trend in 2010, December 2009 = 100



Source: NSS

However Armenia was not the only country to suffer from inflation. As shown in Exhibit 4 neighboring CIS economies demonstrated quite similar patterns which is largely due to inflation press induced by global commodity markets and increased government spending.

Exhibit 4.
CPI of neighboring CIS countries in comparison, % (December 2010 over December 2009)

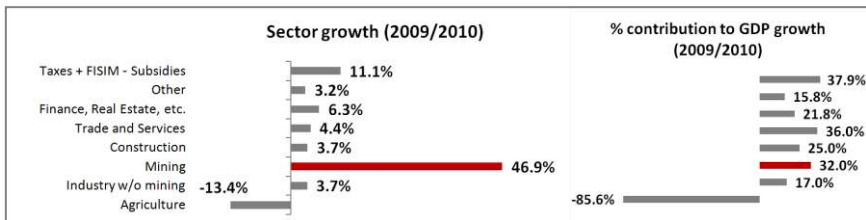


Sources: NSS, National Statistics Office of Georgia, State Statistics Committee of Ukraine, Bank of Russia

ANATOMY OF THE ECONOMIC GROWTH IN 2010

Modesty of 2.6 % economic growth of 2010 was to a large extent conditioned with 13.4% decline in Agriculture – in turn mainly a result of unfavorable weather conditions (further analysis reveals that livestock sector has not suffered losses and the whole heaviness of the shortfall was on the shoulders of the crop sector). The major driver of growth was mining, followed by financial sector. Tax collections captured higher share of gross value added. Noteworthy, in case Agriculture hadn't declined, the GDP growth would reach up to 6.7%.

Exhibit 5.
GDP growth by sector



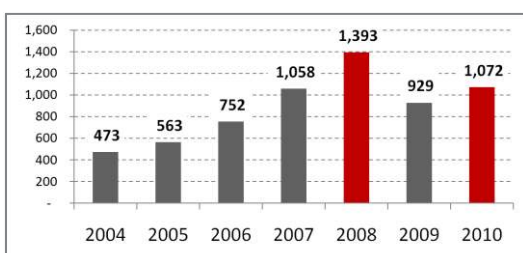
Source: NSS

Mining was the most rapidly developing sector in the economy, recording a significantly higher growth rate compared to other sectors. With only 2.54% share in the total GDP, the mining sector contributed 32% of the total GDP growth in 2010.

The recovery of Armenian economy to pre-crisis levels might be without qualitative improvement of its structure and nature.

The fact that one of the major factors of economic growth was mining partially explains the reasons of exports growing faster than imports: the growth in exports was mainly driven by the dramatic increases in metal prices in international markets in 2010. Whereas, the demand for imported products of mainly FMCG character didn't grow as fast mainly due to the household income growing slower: the net individual private transfers attained only 77% of 2008 level (see Exhibit 6) thus restraining the local demand for imported goods. This, together with the fact that neither exports nor imports have regained pre-crisis 2008 levels, further confirms our doubts that along with growing disposable income of the population the trend of growing import-dependence will restore.

Exhibit 6.
Net transfers of individuals sent to and received from abroad through Armenian commercial banks

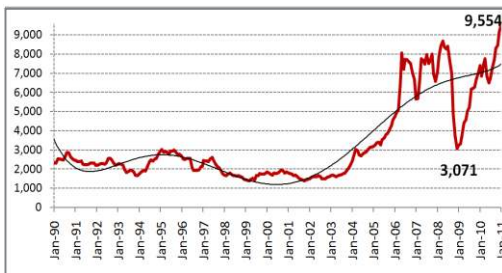


Source: CBA

MINING – THE RESOURCE-BASED DRIVER OF ARMENIAN ECONOMY

Copper industry output comprised 30% of Armenia's total exports in 2010

Exhibit 7.
LME copper price (cash buyer), 1991-2011, USD/t

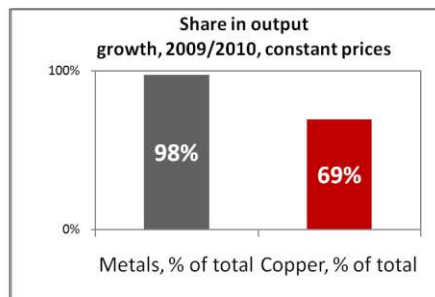
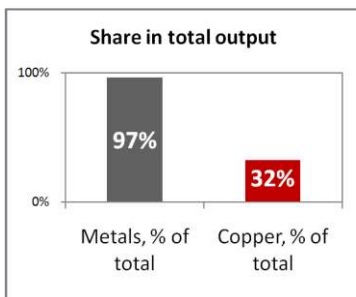


Source: LME

Mining, one of the major contributors to the economic growth, seems to be holding its leading position for coming years. A number of factors are going to foster this trend:

- Global prices for mined goods have recovered from crisis downturn and have been on a steady rise since 2009,
- Most mines plan to expand their production capacities,
- A number of mining projects are on their way to realization (e.g. Teghout, Dastakert, Hrazdan, Abovyan, etc).

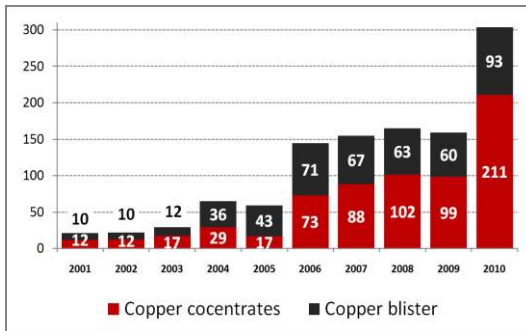
Exhibit 8.
Mining sector output and growth structure.



Source: NSS

Noteworthy, copper mine production was the main driver of the growth in mining in 2010. Exhibit 9 reveals that with total USD 304 mln. exports copper comprised 30% of total exports in 2010. While comprising only 32% of total mining output, copper mining secured 69% of its growth during 2010.

Exhibit 9.
Copper export structure, USD mln.



Source: UN Comtrade

The major source of the copper mining growth in 2010 was the substantially increased output from Kajaran and Kapan mines. High copper prices made it possible to realize such small projects like Hankasar mine with capacity of 2 thous. annual tones of copper concentrates (5-40 times less than other mines in Armenia).

Exhibit 10.
Key figures of the copper industry, thous. tones

	2005	2006	2007	2008	2009	2010
Copper recovery						
Actually recovered copper (contained)	14.9	17.5	18.0	18.2	23.2	31.0*
Copper industry output						
Blister (black) copper	9.9	8.8	7.0	6.5	6.9	7.6
Copper concentrates	62.8	68.2	67.0	71.3	88.3	118.1

Source: NSS, UN ComTrade

* EV Consulting estimate

Overall, the Armenian copper industry demonstrated firm growth trend since 2005 (16% CAGR 2005/2010) attaining output of approximately 31 thous. tons of contained copper² as of 2010. Production of copper concentrates increased 34% in 2010 and Alaverdy smelter (with concentrate supplies from Kajaran and Drmbon mines) produced 10% more copper blister.

² The main products of Armenian copper industry are copper concentrates and copper blister. Copper concentrates contain 22-30% copper while copper blister contains 99.5%.

ARMENIAN COPPER INDUSTRY: DEVELOPMENT PROSPECTS

The common view on the industry is that Armenia fails to capture the value added by exporting the raw concentrate only. However, at present Armenia grasps almost 95% of the value added in copper industry, since the miners get almost complete compensation for the valuable metals contained in the concentrates produced.

One of the major loss centers of the industry is the transportation. Since mines produce copper concentrate with only ~25% copper content, they have to pay for the transportation of the other 75% valueless weight. Thus, possibility to save on these costs would be one of the main considerations of establishing a copper smelter and refinery in Armenia. Possibilities of spillover development effects to adjacent industries, such as cable and else, are yet another major advantage.

In the meanwhile, the copper industry growth has substantial potential. A number of key projects are currently in progress and are expected to have a major impact on Armenian copper industry.

- **New and revived mining projects.** With copper prices driving high, more and more new and revived mining projects come into sight. Teghout (in Lori), Dastakert (in Syunik) and Armanis (near Stepanavan) are expected to more than double the country's copper output.
- **Establishment of copper refinery being considered.** The establishment of a copper smelter/refinery in Armenia is discussed. Among the options are pyrometallurgical plant or a hydrometallurgical refinery in South. In case of successful launch of the project, the adjacent mines will have the opportunity to significantly save on transportation costs and a higher level of value added will be captured by the country. However, the project is prone to significant technological and market risks which need to be seriously considered before a decision is made.
- **The future of Alaverdy smelter.** Currently Alaverdy smelter is the largest air pollutant in the Northern Armenia with very outdated technology and equipment deployed. The smelter operator – ACP, claims the operations being of more social nature (it provides with employment to 674 people) and not profitable. The mix of economic interests, tremendous social role and ecological problems together make the future of the smelter very vague.

SUMMARY

- Armenia's economic growth prospects are ambiguous. Current statistics indicates that growth is to a large extent conditioned with development of mining sector and high global prices for resources. With further increase of private transfers and local demand, Armenia may retake to the needle of private transfers and continue sinking in import dependence. All this hints that policymakers should stay alerted and proactive to foster export-oriented growth in Armenia.
- Mining (and particularly of copper) is expected to have a key role in the Armenian economy. More and more projects are expected to develop along with increase of metal prices. However, there are little prospects for moving up along the value chain to capture more value added since this is subject to huge capital expenses and opportunity cost considerations.

EV Consulting is a management advisory firm that serves companies and industries aspiring to move to the next level of competitiveness and innovativeness.

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EV Consulting

123 Hovsep Emin
Yerevan 0051
Republic of Armenia

Tel: +37410 219740
info@evconsulting.am
www.evconsulting.am

