Development and Marketing
of
Project Finance & Project Monitoring
as New Services –
The Case of SGS Zurich

Master’s Thesis in Business Administration, MBA Program

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Abstract

The need to be present and invest in foreign markets beyond companies` own geographical borders necessitates strict supervision. This is not easy and of course not inexpensive for investing bodies to firstly decide reasonably on investments which would be feasible and assume financial undertakings and secondly have regular presence in their investment project and their location. Furthermore they may not have the necessary resources or required expertises within their own organizations to assign to these types of jobs. This is why project finance and project monitoring services as a package offered in SGS Zurich will assist investors to make a logical decision prior to investment is taken place, unveil risks in early stages of the project life cycle and act as the eyes and ears to report on the project’s status. All are done to eliminate and possibly minimize risks during various phases of project life cycle which may yield heavy penalties and losses as well as negative consequence on all parties involved. These services will help the investors to circumvent the above mentioned risks.

This paper intends to develop these new services “project finance” and “project monitoring” services. It would like to correctly define the scope of work and market it to interested entities.

It is important to understand the term of project finance in order to be able to then engage in project monitoring. Nevertheless, the author finds various aspects which move from the realm of finance to good governance. The outcome of this paper will be utilized specifically for SGS Zurich. A business plan, by the author, will be annexed to this thesis work.
Acknowledgment

I would like to thank SGS for giving me the opportunity to work on developing these new services on its behalf. I would like to thank Daniele Raldi, Head of Inspections Departments at SGS Zurich for his regular support and valuable insights. I would also like to thank my fellow students who took time to read my paper and of course, above all, my supervisor at Blekinge Institute of technology (BTH), Peter Stevrin for his invaluable inputs.

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Behrouz Tizro
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1 Introduction

1.1 Background

Emerging economies and undeveloped countries require large investments in their infrastructures in order for their economies to grow. Quite often, their demands are far beyond their economic resources. A number of authors agree that project finance is a suitable methodology to finance such countries’ infrastructure (Hoffmann 2008; Sorge 2004). Ebrahimnejad et al. (2009) also approves that and states that, in particular, developing countries, to achieve a sustainable growth, need to focus on infrastructure development. However, it is obvious that quite often emerging or undeveloped economies do not have sufficient capital to allocate to several large-scale, capital-intensive projects. Megginson (2010) gives example of the projects ranging from natural resources, electric power stations to transportation.

Megginson (2010) defines project finance (PF) as “the creation of legally independent project companies financed with equity from one or more sponsoring firms and non-recourse debt for the purpose of investing in a capital asset”. He goes on further to state that what makes this financing scheme distinct from other existing methods is that, firstly, funding is used only for the project itself and, secondly, creditors share the business risks (Megginson 2010).

In reality however, quite often, the lenders such as banks or syndicates of banks who are financing the debt (Sorge 2004) are geographically removed from the investment projects which brings with it many uncertainties. How they can make sure that the project is technically and environmentally feasible before entering financial obligations with such an investment? How they can be confident that their financial capital is spent according to their contractual agreement and that the project progresses within the expected budget, quality level and time? How they can be sure that the project will end at the expected time thus allowing the debts to start being serviced (i.e. repaid as the infrastructure becomes operational)? Or whether all required permits have been obtained or whether domestic laws and regulations have been taken into account during the development, design, engineering, construction and operation of the project in order to avoid technical and environmental risks which may even lead to the suspension or closure of the project, which may have heavy consequences for investors? How can investors avoid these risks during different phases of the project cycle? After the development, design and engineering phases and during construction phase, which normally requires the bulk of the investment, how can investors make sure projects are completed on time, within budget and with the required quality? This is an important phase for investors and for their capital. Mahaney (2010) argues that many projects are canceled before completion, many exceed their allocated budgets, are completed far beyond their agreed due date or are completed without taking into account the expected quality level or do not meet required domestic and international standards and norms. These risks lead to the project’s failure if they are not surfaced and eliminated at an early stage in a project’s life cycle and before too much money has flown into a project. An efficient project monitoring system can overcome such risks or possibly minimize them and unveil them at an early stage before it is too late to cure.

The above issues therefore will make hiring a third-party expert company to perform feasibility and due-diligence tests before too much money has been invested a good way to identify faults early on, but also during the project’s design and engineering, control and
monitor phases in order to alarm investors of any possible risks. Such monitoring may even go on once the infrastructure is completed and in operation.

SGS is planning on introducing two new services: project finance and project monitoring. They are meant to support investors by performing various investigations prior to investment, during investment and even after the project is operational, by means of due diligence, surveys, and feasibility studies in different fields of engineering to identify such risks. They will help investing bodies to make their final decisions based on tangible facts and will assist them to efficiently supervise their investments. The author of this study is employed by SGS; therefore, this thesis has been written with SGS in mind. Whilst SGS headquarters already has a division, the Zurich office does not yet offer these services. The result of this study should help SGS add project finance and project monitoring services to its already sizeable palette of services on offer. SGS, being a certification and inspection company, disposes of engineers of all kinds which could be used for this purpose, especially in view that many services are undergoing temporary slumps for a number of reasons.
1.2 Purpose & research questions

The need for large-scale investment is increasing in the world particularly in emerging markets in sectors such as energy, natural resources and infrastructure (Megginson 2010). Due to their large capital investment, their complexity and long lead times, usually these types of investment projects require precise and thorough risk analysis prior to engaging in such investments. Such reports are studied by investing bodies to have a better idea about their return of investment as well as to know whether the project output will satisfy all contractual agreements, technical and environmental international norms and standards and whether they will be in line with the estimated budget, time and quality level (Mahaney 2010).

Mahaney (2010) believes that this is a demanding work and a major challenge in today’s projects when it comes to managing the projects. Quite often, either investors do not have the necessary resources within their own organization or it is expensive to control and monitor the project investment particularly during the construction and operation phases themselves as it may mean having to hire extra personnel specifically for such a project. It therefore makes sense to hire a third party expert which has all of the engineers on hand already. SGS’s service package of project finance (of which project monitoring is one of the core services) is mainly applicable in the construction and operation phases of the project. It could help investors to overcome this issue and meet their expectation in a more inexpensive fashion and carried by an expert body.

This paper aims to develop project finance and project monitoring service package, to clearly define the scope of work and to market them in the Swiss market in order to assist Swiss investors. Investors could be banks, insurance companies, construction companies or even private persons. Project finance and project monitoring could help investors take better informed decision before entering into any responsibility or finalizing their financial agreements. To reach this goal, the author has used SGS, his current employer, as a platform for his research. This study’s aim is to professionally and systematically develop these services so they can be offered by SGS Zurich.

The scope of project finance services offered by SGS is restricted to services which are associated with controlling and monitoring technical and environmental aspects of project financing and not include legal or business advice as this is not a core competency of SGS. Hence the first question to be investigated and answered in this work will be:

- How can project finance (PF) and project monitoring (PM) services be properly developed as two new services to assist investors to be aware of the technical and environmental risks?

Subsequently marketing strategies will be defined to introduce and market these two services to investors, how investors could hear about the services and how the service providers and the interested investors, which could range from governments, banks, insurance companies as well as private investors who are willing to invest in different projects, could be linked up. These could involve diverse industries, such as agricultural, power, renewable energies, oil and gas, chemicals, infrastructure and building, mining, utilities.

Finding the potential market will not be easy. To be able to target the market, SGS Zurich needs to identify customers’ real needs but also make them aware of the benefits they can gain from these services if they are rendered by an expert and independent party. SGS, which
has the vast network all over the world, could bring cost efficiencies to investors by deploying local experts to the project, i.e. persons who are familiar with the local culture, language and rules and regulation of the project country, and who are closer to the investment location. To highlight all these benefits to potential investors, SGS will need to define marketing strategies. Therefore another question which the author will investigate is:

- **How can these services be marketed and introduced to the potential investors which could range from governments, banks, financial institutes to private investors?**

Ebrahimnejad *et al.* (2009) argues that economic developments require large-scale investments in infrastructure and that of course require foreign investment due to the fact financial resources of countries specially development and undeveloped ones are not usually enough to cover the capital required for several projects at the same time; however, investors may hesitate to invest in another country as it is often not clear whether their investment will have the expected return and its cost will not be overrun. It is important to avoid fraud as they do not have direct control on expenses and quality control as it would be expensive to be present in investment country on a regular basis and they may miss the required expertise within their own organization. To give an example, the Swiss Development Cooperation is participating in various social projects in undeveloped countries or in the enlarged European Union, particularly in emerging East European countries such as Poland, Romania and Bulgaria. How they can make sure that their investment is truly spent on the project within the right financial budget range and within the agreed quality level. They may, of course, have their own control system however; it is always difficult to have full control over different projects which are running simultaneously. The proposed project finance and monitoring services could be an interesting package for such institutes or investing bodies. It is to their benefit if they solely sub-contract and deal with the service company in Switzerland (investor’s country) and get regular status report rather than sending their own experts. Firstly, it could be much more inexpensive for the investor, secondly, it would be much faster, and thirdly, it will unveil the technical and environmental risks or fraud during the construction by experts so corrective action can be promptly taken. Therefore, the third question in this work would be:

- **How will investors benefit from such a service package?**
1.3 Structure of the paper

The first part of this thesis is to introduce project finance and project monitoring as concepts and give short background of SGS. These sections will be followed by the methodology used to collect data and create a theoretical framework as ground for my analysis section. The analysis will be based on case studies conducted by SGS Global as well as interviews with experts in these areas. The paper will end with a conclusion and if necessary, provide improvement recommendation. See figure 1-1.

The author of this thesis was asked by SGS to provide a business plan for these two services while conducting his thesis work. Therefore, the business plan will be annexed to this thesis.

Figure 1-1: Structure of the paper
2 The Company

2.1 The Company Presentation

SGS Zurich is a branch of SGS Group, the world’s leading and largest inspection, testing, verification and Certification Company. From the very beginning, SGS has been and still is the benchmark in regard to quality. The latest statistics prove that SGS’s number of employees has reached 59,000. Furthermore, SGS is active in almost 1000 offices and laboratories around the world.

More than a century ago, this company started as a grain inspector. Today, SGS consists of 10 business segments active worldwide. Its current structure dates to 2001. Despite various ups and downs, the company is still considered to be the leader in this industry. It has achieved this by continuously improving its services, thus allowing its customers to mitigate their sometimes considerable business risks\(^1\). According to its website, the company offers services to the following industries:

![Diagram of business lines and core services]

**Figure 2-1: SGS core services and business lines**

*Agricultural Services (AGRI), Minerals Services (MIN), Oil, Gas and Chemicals Services (OGC), Life Science Services (LSS), Consumer Testing Services (CTS), Systems and Services Certification (SSC), Industrial Services (IND), Environmental Services (ENVI), Automotive Services (AUTO), Governments and Institutions Services (GIS)\(^2\)*

SGS Zurich is the operational unit of SGS in Switzerland. SGS Zurich’s portfolio includes CTS, IND, SSC, GIS, Automotive services, which will be briefly elaborated later on in the

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\(^1\) [http://www.sgs.com/about_sgs/in_brief.htm](http://www.sgs.com/about_sgs/in_brief.htm), Accessed on 01.05.2010

\(^2\) [http://www.ch.sgs.com/in_brief_ch](http://www.ch.sgs.com/in_brief_ch), Accessed 01.05.2010
divisions and product section. SGS Zurich, in turn, includes 3 operational sites in Zurich, Geneva and Locarno.

2.2 SGS: Divisions and Products

2.2.1 Consumer Testing Services (CTS)

CTS is a division of SGS Group which covers the entire supply chain from product development to retailing for all consumer products. SGS Zurich renders a full scope of services, including testing, product inspection, process assessment and technical assistance for all types of industries and everywhere in the world. For this purpose, it entertains a number of its own laboratories which are wholly independent.

2.2.2 Governments and Institutions Services (GIS)

This service provides compliance with country-specific laws and allows governments to discern the proper value of goods shipped in and out of its national border thus allowing proper taxation. It also makes sure that all of the importing rules are complied with, thus streamlining the whole process. According to the website, the company’s main services are price verification, independent monitoring and validation of declared information.

2.2.3 Industrial Services (IND)

As companies are being judged more and more on their ability to provide safe and reliable products and services, it usually requires an independent source to verify these aspects. This is why this is one of SGS’s most important lines of service. As per its website it provides technical verification, inspection, and testing and conformity assessment. It does this by testing “installations, material, equipment, facilities and projects to see if they indeed meet all quality and performance requirements.”

2.2.4 Systems and Services Certification (SSC)

This service line provides assurance that certain systems and processes are in place in order for a company to qualify for certain labels, which these days have become important marketing tools and the breach of which would entail much reputational damage. The company’s service can deliver extra value, improve quality management and performance, minimize risk, and gain a real advantage over the competition.

The aim of this thesis is to find out how project finance and project monitoring services can be effectively attached to one of these business lines and if yes, how it can then be marketed properly.

3 http://www.sgs.com/lob/consumer_testing_services.htm?lobId=5547, accessed on 24.05.2010
4 http://www.sgs.com/lob/governments_institutions.htm?lobId=5549, accessed on 24.05.2010
5 http://www.sgs.com/lob/industrial_services.htm?lobId=5550, accessed on 24.05.2010
6 http://www.ch.sgs.com/home_ch_v2/lob/systems_and_services_certification_services_ch.htm?lobId=22978, accessed on 24.05.2010
3 Methodology

There are normally two types of methodologies to deal with this kind of thesis work: theoretical and empirical data collection methodologies. Hence, to outline this thesis work’s theoretical platform, literatures, such as books, articles have been studied to get familiar with the concepts, such as Project management, project monitoring, project finance, marketing strategy and marketing. The aim has been to be able to use the theoretical findings in the analysis of study.

The data collection has been based on primary data and secondary data and has been aimed to evaluate and understand the current situation of the company particularly in our research area to be able to make a comparison with our theoretical framework in analysis section. Thus already conducted works in this area and interviews with people involved shall have more emphasis.

Primary data are referred to those data which are collected solely for the purpose of that specific study work. Thus, in this work primary data have been collected mainly by means of interviews. In this thesis work, author has used interviews by means of telephone, sending set of questions to involved people by e-mail as well as few personal meetings.

As suggested by Yin (1994), the interviews are divided into two types; “open-ended and focused” types. Focused interview are usually designed with focused questions. This means that interviewers asks question and interviewees answers the question and they proceed to the next question. In another word, they only focus on certain questions. While open-ended interview, as the name implies, is designed to leave the option open on the table for the interviewees and interviewers to come up with new questions and answers which would be the result of the previous discussions or answers (Yin, 1994). In this thesis work, both open-end and focused methods have been used. First a set of focused questions were designed and sent to the interviewees by e-mail.

Secondary data are referred to those data which have been already produced and have been available within the organization and without being aware of this specific project. This means literature in the areas of research, articles, books, company website, those projects in the area of project monitoring and controlling or project management within which SGS affiliates worldwide have been involved, as well as already defined scopes of work done by SGS across the Group have been refereed as the main source of our secondary data collection.

3.1 Theoretical method

As mentioned above, theory will be mainly based on reviewing different literature on project management, project finance, project monitoring, and marketing, marketing mix strategy in order to clearly define these services and use the theoretical framework for the analysis section. In Addition it tries to unveil the deficiencies in right interpretation of the already defined scope of work in order to complete the scope by adding means of scientific finding.

3.2 Data Collection

The data have been collected by means of interviews (Primary data) and scientific books, articles and, case studies and already defined scope of work within the company (Secondary
data) in order to meet this thesis work’s expectations which are to develop the services and, if possible, to improve various aspects of these services which have already been implemented within SGS.

3.2.1 Case studies

Various projects, conducted within SGS by different affiliates of SGS worldwide, have been studied to get familiar with the way SGS comprehended project finance and project monitoring services. The summery of some of case studies were accessible by public through SGS group website albeit certain parts are only accessed within SGS Share-point or intranet. The links to these assignments has been referred while analyzing the assignments. There have been many projects within which SGS has been involved and contractor as advisory body however the author has tried to use the most recently conducted projects. They have been reviewed and analyzed, i.e. in order to find out the what the company’s understanding has been of project finance and project monitoring, what services within the package of project finance services have been offered, and what has been the scope of work normally requested by the client and finally how these services have been ultimately marketed. The author has used 8 different project summaries (case studies) which have been conducted in different sectors, for instance solar energy, power plant and etc, in order to extract the detail scope of work.

3.2.2 Interviews

The interview questions were designed with the literature review in mind and by analyzing the projects that SGS has already performed. A sample of people within SGS group, who has been involved in project finance services, was selected. The author tended to use the knowledge of both the operational units as well as the people in the competence center located at headquarters. The people from competence center unit in SGS Geneva were asked for advice concerning the marketing strategy and more about the theoretical background of the services, in order to get advice about the potential markets and the way we could identify and approach these interested bodies, while informants in SGS Austria were selected for their experience and past involvement in similar projects.

Before starting this thesis work, the author held a meeting with the former Head of Finance from competence center. Upon analyzing the information received, the author interpreted that the project finance services have been mixed up because financial feasibility study was always referred as one of the core services within SGS Project finance service package. In fact financial advisory has been the consultancy service within which SGS was not supposed to enter (at least up to the moment of conducting the thesis) nor had the resources for.

The questions mainly focused on business procedure, operation, and scope of work as well as the marketing strategies. However, the expected assistance and inputs were missed from SGS competence center side. Moreover, the author held regular meetings with the head of inspection departments at SGS Zurich in order to validate his findings and get more input on them. The result of these regular brainstorming had significant impact in the outcome of this work.

The table below shows to whom the questionnaire was sent and their contribution:
<table>
<thead>
<tr>
<th>SGS Affiliate</th>
<th>Position</th>
<th>Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>SGS Zurich</td>
<td>Head of Inspections Departments</td>
<td>Yes</td>
</tr>
<tr>
<td>SGS Austria</td>
<td>Business Manager</td>
<td>Yes</td>
</tr>
<tr>
<td>SGS Austria</td>
<td>Project Manager</td>
<td>Yes</td>
</tr>
<tr>
<td>SGS Austria</td>
<td>Project Coordinator</td>
<td>Yes</td>
</tr>
<tr>
<td>SGS Geneva (Holding)</td>
<td>Business Development Manager</td>
<td>No</td>
</tr>
<tr>
<td>SGS Geneva (Holding)</td>
<td>Head of Project Finance Services</td>
<td>No</td>
</tr>
</tbody>
</table>

Table 3-1: Interviewees

The set of questions in the form of focused question (see annex 2, PP 76-78) were designed and sent to both competence center in SGS Geneva and at the same time to SGS Austria project finance team by e-mail. Please see table 3-1 which shows list of interviewees. From SGS Geneva, the head of project finance departments, the global business development manager received the questions. Unfortunately, the author did not receive any contribution and support from this unit. From SGS Austria project finance service team consisted of the Business Manager, the Project Manager and the Project Coordinator. They discussed the questions internally and prepared their answer.

One of the topics discussed relates to the various phases of the project life cycle. The competence center had already defined phases of project life cycle which were rejected by the author and a new model was outlined based on the theory (See Figure 5-2: Phases in Project life cycle). The new model consisted of development (phase 1), design, engineering and construction (phase 2), start up (phase 3) and operation & maintenance (phase 4). This rebundling intended to show where SGS can offer its unique expertise in project finance services and project monitoring. To validate the defined model, it was sent to the interviewees to get their approval or rejection. Based on the feedback received a new model was defined and therefore the figure in “Figure 7-1: Final defined project finance life cycle” was re-defined and validated.

Furthermore, the scope of work in each phase shown in the table in annex 2 (pp77-78), was defined based on the theory, the previously developed scope as well as the analysis and study of the projects (case studies). The interviewees were asked to validate, add or reject the scope with argument. The validated result was shown in table 7-2.

Another theme discussed was the placement of project monitoring service within project finance service package, particularly its position within the different phases of a project’s life cycle. This was done to specify when, where and in which phase or phases SGS can provide this service. The result was also shown in table 7-2. Moreover to make sure that SGS has never been involved or willing to be involved in providing legal and financial advisories, the author asked the opinion of the interviewees who in fact confirmed this point.

Subsequently, the author asked the interviewees about their marketing experience, i.e. how they had identified and defined their target markets for each service and outlined the respective marketing strategies based on their findings. However, the interviewees had only targeted banks. However the author will try to be more specific and specify different target markets for each service. The other question can be found in annex 2 (pp76-78), interview questions. Subsequently, the author asked about the interviewees marketing experience in order to identify and define the target markets for each service and accordingly outline the respective marketing strategy. However the only potential customer which was mentioned by the interviewees was banks. However the author tried to be more specific and detail and specified different target market for each services. The other question can be found in Annex
2 (pp76-78), interview questions.
3.3 Limitation

One of the main limitations has been the time limitation in comparison to the volume of the work this thesis required. Another limitation has been related to the nature of certain data, for example minutes of meeting and the contents of contracts which have been available among internal studied documents however since they have been confidential, they have not been referred but some of them or the knowledge gained by studying these documents and data have been anonymously in order to make the paper coherent for a third party. The other limitation has been associated to the number of scientific articles published in project finance and project monitoring area seems to be very limited. It should be mentioned that since the service is considered as young service within SGS group, few people were found to be interviewed.
4 Motivation

Indeed, like any other company and corporation, SGS Zurich’s primary aim would be to grow as well. Of course some companies grow by acquisition and others grow organically. In line with the growth strategy of SGS Holding, SGS Zurich’s strategy is also to grow in both ways. SGS Zurich is somewhat limited in its efforts to expand: on the one hand, it is considered to be a tiny cog in huge machinery (it currently employs around 30 (office people) out of 59,000 employees) and due to the limited market that Switzerland offers, its size has not grown dramatically in comparison to other affiliates. On the other hand, Switzerland, being an attractive location tax-wise has a number of very large companies domiciled here, despite the fact that these companies are traditionally considered to come from elsewhere. SGS’s policy is to have the office handle a project it may be hired for according to where a company has its domicile. So, for instance, despite the fact that a company may originally be Italian and have retained its Italian flavour, a project may still be managed from the Zurich office because this company has decided to relocate its financial headquarters to Switzerland.

The author of this paper is eager to enhance his business case as the field he is traditionally involved in is currently suffering setbacks due to international politics and a shift in sourcing, diminishing Switzerland’s position as a source of goods. It is therefore important for him to grow into a different direction in order to be as productive as previously. Project finance and project monitoring could provide an important alternative, especially as the Zurich office has not yet seriously engaged with these services for various reasons.

Project finance and project monitoring are services which could provide customers with assurance that their projects are feasible or on track. Their aim would be to assist the investors to obtain an idea about feasibility of the project they are going to invest in and get to know the possible various risks involved and subsequently supervise their investment processes from beginning to end of the design engineering and construction phase, particularly when the project is far beyond the investors’ geographical reach.

The interviews have revealed that as a matter of fact, SGS does not truly engage in project finance as it is not a financial intermediary. Being an assurance company, in fact, it engages in some aspects of project finance services such as technical and environmental due diligence and feasibility studies, project monitoring services and etc which fits into the company’s product portfolio much better and which does not require much investment. Unfortunately, the company has used the term “project finance” to circumscribe its services.

The author has chosen to provide a review of project finance and project monitoring literatures, as it is important to define the service correctly. Nevertheless, monitoring may also includes non-financial aspects, such as timing and for instance other aspects that may hold up a project, such as corruption which will be clearly defined during cases studies and interview and of course literature review. In fact, this insight moves the entire thesis from finance to good governance, which is ultimately just as important for project finance as the financing aspect of it as it allows a project to grow and develop as it was intended instead of being a mere shadow of its intended being.
5 Literature

In this chapter, literature connected to project finance and project monitoring as well as marketing will be studied in order to use it as a baseline to analyze the data collected for this thesis.

5.1 Project Finance

Hoffmann (2008) defines project finance as a term to mean financing structure, also called “non-recourse or limited recourse financial structure”, in which debt, equity and credits are combined to finance a construction, operation or even refinance facilities or projects mainly in capital-intensive industries where a large amount of investment is required and where the risks involved are high (Hoffmann 2008).

Bis (2009) defines the project financing as “a method of financing an entity through sponsor equity and generally non-recourse bank debt to be repaid by the cash flow of the enterprise”. He also believes that this method of financing has never been applied in production, acquisition, and monetization of patent assets. Bis (2009) claims that project financing would be a useful method of financing when “the sponsoring entity wishes to use leverage to fund a project but also wishes to keep this off its balance sheet” (Bis 2009). Akbiyikli et al. (2006) also defines project finance as “a method of financing large-scale, capital intensive projects” where the cash generated from the projects are used to repay the loans. Megginson (2010) states that project finance is used “to fund natural resource, electric power, transportation and other ventures”. Esty (2007) also defines Project finance as “the creation of a legally independent project company financed with equity from one or more sponsoring firms and non-recourse debt for the purpose of investing in a capital asset”.

Megginson (2010) argues that what distinguishes project finance from other types of financing is that debts are expected to be paid by the project itself and not by government repay the project debts as well as risk sharing feature of PF between creditors. Elsewhere Megginson (2010) argues that project finance is perceived as an efficient “method of obtaining long-term, relatively low-cost financing for capital intensive projects in relatively risky countries”.

Sorge (2004) argues that in project finance processes either a public or private sector might invest in a legally independent entity which is normally financed by non-recourse debt. This means that debt services or debt repayments depend mainly on the revenue or cash which is generated by the project itself.

Elsewhere Hoffmann (2008) argues that in project finance, lenders usually calculate credit appraisals based on the revenue projected from facility operation or project operation rather than other assets or credit given by the sponsors (Hoffmann 2008). Additionally, non-recourse debt is based on facility assets and any revenue generated from the facility assets. As discussed, in non-recourse project financing, project finance lenders, in calculating and allocating credits to certain projects, they base their credit appraisal on the projected revenue which is going to be generated from the operation of the project, facility assets such as contracts which would lead to cash flow or revenue generated by facility after implementing and operating, instead of general assets. Fluctuation in revenue or expenses due to failure of one of the components of the project could result in failure in entire project (Hoffmann 2008).
5.1.1 Model of Project finance:

As figure 5-1 depicts, in project finance, a project company is a party which is in the centre point of various parties involved which tries to allocate risks to different parties based on their capability in assessing and controlling them. As an example, as you can see in figure 5-1 of Sorge (2004), construction risks are allocated to the contractor and risk of market or demand risk is allocated to the off-taker.

The main aim of project finance is to create a balance between different parties’ risk-taking shares as well as act as a supervisory or monitoring body to control their actions and make sure that all parties’ ultimate aim is to reach the objective of the project in a coordinated and cohesive manner (Sorge 2004). The advantage of this project financing investment method also lays in the fact that equity and debts are concentrated which makes the monitoring process easier and therefore minimizes possible conflicts of interest among parties.

As figure 5-1 shows, equity are normally provided by several small sponsors and debt is loaned by a group of banks called “syndicate of banks”. Moreover in a typical project company there are nearly 70% non-recourse debts from banks and 30% of equity comes from the sponsors. The project company’s inputs are labour, equipment, any other raw material to process them into products. The entire process chain is managed by a Project Company but with the regulatory framework provided by the government where the project is located, therefore called the “Host Government”.

Figure 5-1: Typical project finance structure (Sorge 2004)
5.1.2 Type of Project finance structures:

Hoffman (2008) argues that there are 3 types of project finance structure: “1) Non-recourse financing, 2) limited recourse financing, 3) project output interest financing”.

He defines non-recourse and limited recourse structures as types which payment appraisal is based on the cash flows generated from the project while output interest financing structure is based on the purchase of an interest within the output of project (Hoffmann 2008). Generally speaking, the loans or funds are lent to the project company in order to proceed with financing its construction and operation phases and the project company is obliged to repay the loan or its debt with any kind of interest or administrative fees which may be involved (Hoffmann 2008).

5.1.3 Project finance advantages for investors:

Large investments and upgrading or modernizing of existing infrastructure is becoming increasingly necessary all over the world. This, of course, requires large amount of capital, partially raised by borrowing funds. Project finance is an ideal financing scheme for financing large infrastructure and capital-intensive projects such as energy, transportation, tourism and other industries in various part of the world where the intense demand for infrastructure and civil engineering projects particularly exceed the available economic resources (Hoffmann 2008). Hoffman (2008) argues that project financing is normally utilized by “established and well-capitalized” companies which pursue one or several objectives in order minimize their risks in large and capital intensive investments which usually includes high debt liability and commitments. In brief, Hoffman states that project financing may assist developers to execute various projects in different parts of the world, totally independent of other project financial obligations. He therefore argues that as a consequence, requirements might be different from one project to another due to, as he explains the “risks”, “capital needs”, “capital access”.

5.1.4 Risks in investment in various phases of project life cycle:

Hoffmann (2008) argues that the risk structuring process is a crucial part of project financing. He states that during this phase, risks should be revealed and analyzed, quantified, mitigated, and allocated in order not to risk the existence of the entire project and delay the development, construction and operation of the project to cause revenue shortages as this would hinder the project developer to pay the project debts or operating expenses or pay back investors.

Due to the fact the project financing is either non-recourse or limited recourse, the financial liabilities should be allocated to the people or parties which can assume such liabilities and are capable and possess enough credit to accept such risks (Hoffmann 2008). Hoffmann (2008) believes that risk allocation varies from project to project. He thinks that it largely depends on the bargaining power and positions of the participants and, of course, the project’s nature and its ability to cope with the risks. Essentially the risks should be allocated to the party who has the highest influence on the final result and who can control and mitigate the risk. Of course, this risk allocation will demand compensation by the party to whom the risk is allocated which would of course depend on the size of the risk assumed. Hoffmann (2008) states that project financing includes four type of general risk:
- **Development Phase Risks:**
Risks at this phase are those risks which are associated with project sponsors and the lenders of development loans. The risks in this phase may include failure in collecting the necessary permits normally required from governmental institutes or any kind of criticism against the project. Hoffmann (2008) states that normally risks are high in this phase in comparison to other phases. However, he states that proportionately rewards are also high at this stage but that risks are increased every day which passes from development or while the development phase is in progress (Hoffmann, 2008).

![Figure 5-2: Phases in Project finance life cycle](image)

- **Design Engineering and Construction Phase Risks:**
Risks during design engineering and construction phase are inseparable and natural risks within the project. The new risks arise or the nature of risks changes as the project progresses. Like the development phase, risks in this stage are also connected to the project sponsors and loan lenders for construction phase. Other participants are also affected indirectly if the project is not completed on time or within the budget. Hoffmann (2008) claims that these construction risks may consists of modification in technical design by engineers or by law enforcement, changes in the price due to inflation or currency fluctuation, construction delays and so on. This is a risky phase and the risks in this phase may be very significant for construction lenders (Hoffmann 2008).

- **Start-up Phase Risks:**
This phase is very a critical phase of project financing and due to the fact that project performance is tested in this phase and as Hoffmann (2008) states, it is in this phase that the risks are shifted from contractor to lenders and investors. At the start-up phase, contractors must prove that the project will function and operate as per agreement and at a level of performance that allows for a return on investment, thus enabling the repayment of debts and operating costs (Hoffmann 2008).

- **Operation & Maintenance Phase Risks:**
Risks in this phase are the risks which occur after the start-up phase and when the project has been accepted and all risks have been transferred from contractor to lenders and investors. The risks at this phase will affect operational performance of the project and therefore could impact the capability of the project to repay the debts or equity invested at the originally projected levels. Such operating risk may include shortage in raw material, fuel or output demand fluctuation, technical problems, inflation, foreign exchange rates, strikes, political and regulatory changes and so on (Hoffmann 2008). Operating risks affect not only the Project Company directly but also permanent lenders. Hoffmann (2008) argues that allocating and mitigating risks with techniques such as “take-and-pay-off-take contracts, fixed price fuel and raw material supply contracts, and political risk insurance”, are very important to mitigate the risks and ensure a better return for investors (Hoffmann 2008).
5.1.5 Due Diligence in project finance:

Hoffmann (2008) defines due diligence as a crucial process to identify the potential risks. Reichardt (2007) claims that due diligence “identifies the opportunities and risks associated with potential risks. He claims that non financial aspects of due diligences such as technical, environmental and socio-economic are often not being taken into account during due diligence process. It is during this process that lenders gets adequate level of protection or assurance from its consultants to pursue the investment. He defines due diligence as the process of reviewing and analyzing different aspects of a contract and participants themselves in order to identify the project risks. He argues that due diligence is a process which is done in the following aspects of the project: “legal due diligence, technical due diligence, environmental due diligence and financial due diligence”.

For example, evaluating a potential investment such as a company prior to acquisition could be due diligence. Thus, it aims to unveil risks in these areas that might jeopardize the success of the project or cause project failure (Hoffmann 2008).

Normally investors or lenders would like to make sure that technical aspect of the project will not yield any failure. Therefore they subcontract a professional consulting firm, ranging from engineering firms, fuel consultants to technology specialists, to carry out this job. It is only after this stage that the lender proceeds with investments or lending process. Hoffmann (2008) lists the participants of due diligence ranging from, as he states “lawyers, engineering firms, fuel consultants, market consultants, financial advisors and environmental consultants”. He argues that the due diligence levels are different depending on the availability of time, costs and nature of the project itself.

5.1.6 Feasibility Study for risk identification

Feasibility study normally is done by Investors/lenders or sub-contracted independent company normally prior to granting loan. However additionally it should assist the investor/banker to make a better judgment about the project and subsequently the investment.

Feasibility study is done during project planning process. This shows that how the project or business functions taking into account different assumptions (USDA) such as “technology used (facilities, equipment, and production process) and the financial aspects (capital needs, volume, cost of goods, wages etc)”. Therefore feasibility study examines technical and financial aspects of a project or an acquisition and so on. Hoffmann (2008) states that feasibility studies help to have more detail about the project in order to see whether the project is feasible at all to be operational. According to him, normally feasibility study concern themselves with the requirement of the project such as:

**Technical feasibility:**

Technical feasibility refers to activities such as “analysis of technical processes, design of the plant, construction, various permits, budget of construction, construction timetable, operation and maintenance costs, plans and timetable of maintenance and revenue projections” (Hoffmann, 2008).

**Economic feasibility:**
- **Construction budget**: construction budget is the estimate of development costs, site acquisitions cost, construction contract price/cost, construction permit costs, start up costs (fuel and performance testing costs at the end of construction phase, interest to lenders (IDC, Interest During Construction));
- **Operating Budget**: the operating budget is an estimate of all expected costs of the operation and maintenance phase. These costs are normally management fees, fuel, raw materials, operator fees, labour costs, insurance, disposal cost, etc (Hoffmann 2008).
- **Debt service**: costs such as interest, fees, drawdown schedule of the loans, and the amortization schedule (Hoffmann 2008).
- **Working capital**: Hoffmann (2008) states that project financing is characterized by the ability and capacity of the project to generate enough cash in order to settle its debts to the lenders or sponsors. As in the early stage of the operating phase not enough cash is generated to service all of these requirements, feasibility study should take into consideration the available working capital.
- **Valuation**: an important aspect of feasibility studies of projects is to value the project finance investment. Hoffmann (2008) introduces some techniques such as “discount free cash flows”, “discounting equity cash flows using the cost” and others.
- **Assumptions**: Hoffmann (2008) states that some variables such as interest rates, inflation and price of raw materials like fuels are those that are projected in our financial projection assumptions. Normally these assumptions are based on historical data and past similar activities or projects and ratios foreseeing and incorporating future expectation.
- **Ratios**: Economic feasibility study should also normally include financial ratios in order to predict the future of the project. This means assessing whether the project will have enough revenue to repay its debt or equities. Usually, these ratios are debt service ratios and return on investment (Hoffmann 2008).

**Environmental feasibility:**

Hoffmann (2008) argues that environmental issues are an important part of a project’s life-cycle, development, design engineering and construction and operation. He finds costs such as cost to modify or adjust certain or all equipment to meet new requirements, standards or norms, various types of penalties due to civil and criminal actions and law violations can have a significant negative impact on the project and its sponsors. Environmental law and regulations are not only being applied to the project itself but also to the product or the project as well the waste it may produce. The elements which should be taken into account during environmental feasibility study are listed as:

- **Environmental impact of the project**: the analysis and the information in the environmental feasibility analysis report differ from one project to another and the countries government’s requirements. However Hoffmann (2008) states some of them as, “Site, Air, Water, Plant and animal habitants, Health hazards, Noise, Aesthetics, Histories and cultural significance, Transportation, public services and utilities, indigenous people”
- **Permits**
- **Public oppositions**
- **World Bank environmental standards**
- **Environmental damage**
- **Future environmental regulations**
The equator principles

Feasibility studies normally include estimated capital needs, assessment of the project capability to services debt projection of revenue from the sales of the product of the project. Other variables such as interest rate, cost fluctuation due to reasons such as, inflation, political tension and etc, currency exchange rates might be evaluated as well. The result of feasibility study will help the sponsors and lenders to have better picture and analytical tool from the project before undertaking the project if the project is not feasible economically, environmentally and technically (Hoffmann 2008). Due Diligence helps avoid unexpected and un-projected costs overruns and delays by identifying and mitigating risks before the investment takes place.

5.2 Project Monitoring:

One of the challenges of today’s project managers is to complete the project on scheduled time, on pre-planned and foreseen budget and with the quality which has been agreed upon and accordingly contracted. Many projects are cancelled or suspended before they even come to the end point or they are finalized much below the expected quality (Mahaney & Lederer 2009). Mahaney and Lederer (2009), define monitoring as “keep[ing] track of something systematically in order to collect information”. They state that monitoring consists of different components such as watching, observing and checking continuously. Annecke (2008) also defines monitoring as “continuing operation conducted by project staff during project implementation to ensure that the project stays on track to achieve its objectives”.

Elsewhere, Mahaney and Lederer (2009) argue that the ultimate intention of monitoring is to collect information. This information is classified into three groups. These three classes of information enable managers to

- Ensure their project is within predetermined baseline and timetable and agreed upon outcome/result within allocated and accepted budget limit, quality expectation,
- Supports managers and project team member for better and correct decision-making and finally
- Approves that the expected results and benefit will be achieved. Scientific findings prove that monitoring can dramatically reduce the number of project failure.

The question is how the information leads to project failure reduction. In fact information from monitoring of progress against budget, quality level and baseline timetable is utilized as feedback on the condition of the project to the project team so they can be used as tools to increase people’s accountability and concentration or to increase their motivation. They are also used as guides for taking corrective actions (Mahaney & Lederer 2009).

Monitoring diminishes shirking on the project. Shirking usually occurs by developers when they prefer not to work on some essential tasks therefore causing some task to not be completed on time. This will endanger the entire project schedule and cause the project to go into overrun. Monitoring could help reduce shirking within the project and assist project managers to improve control over their projects. Monitoring pushes developers to concentrate better and more efficiently, particularly on critical tasks that their delay could endanger the entire project’s success or completion date on time (Mahaney & Lederer 2009).

Mahaney and Lederer (2009) define some tools, techniques or practices to monitor a project:
“a project plan, identification and analysis of major risk factors, critical path analysis, Gantt charts, internal posting of project progress for all developers reviews, periodic audit by external auditors, periodic comparison of actual costs to estimated costs, periodic comparison of actual results to planned results, periodic comparison of project progress to schedule, periodic computation of the percentage completed, periodic project review sessions, periodic project team meetings, post completion audit of the project, project management software, project progress reports and time reports periodically produced by developers”.

Saul (1998) also defines the major elements of project monitoring as
a. Measuring the progress of the project’s activities;
b. Identifying and assessing the factors affecting the progress of the project;
c. Assessing the prospects of the project’s achieving its immediate objective;
d. Identifying the actions necessary, and the deadline under which they should be carried out for improving or correcting implementation problems; and
e. Agreeing on the participants that will be responsible for carrying out the necessary actions (Saul 1998).

5.3 Marketing and Strategy

5.3.1 Marketing Mix

Rafiq and Ahmed (1995) defines marketing mix concept as “one of the core concepts of marketing theory”. The argue that the 4Ps concept created by McCarthy has been criticized to be incomplete when it come to services and therefore the additional elements added by booms and Bitner has been welcomed particularly in service marketing (Rafiq & Ahmed 1995).

Rafiq and Ahmed (1995) refers to McCarthy’s definition of marketing mix as set of factors which are in marketing manager’s control to meet customers and markets expectation and satisfy their needs.

Bennet (1997) also defines McCarthy’s “Marketing Mix” concepts as “a means of translating marketing planning into practices”. This means that companies choose one or combination of some or all of these elements to outline their marketing strategy depending on the situation and position of the companies as well as its reputation already made in the market. It changes by change in the nature of the company and type of product it may produce. For example, milks and milk derivative manufacturing companies do not emphasize on marketing effort unless there are fierce competition between several companies otherwise there is always markets for this type of product. However in opposite, competition in car industries has become much more difficult than before as there are many auto manufacturing companies in the market, which are producing comparative products and competitive qualities, require strict marketing efforts to firstly find out the real need of the market and then convert these inputs to the actual product to satisfy the customer needs.

Köksal and Özgül (2007) in their study finds that those companies which change their strategies can, as they say, “maintain or improve their performance in times of crisis”. This emphasizes the point that companies can not only rely in one or a set of elements and strategies and then move forward during their life cycle. Their strategy should be modified and adopted to the current situation and changing needs and requirements of markets otherwise they may face failure and might be easily got out of the market.

Blythe (2001) also in his book “Essentials of Marketing” explains that “marketers deal with
marketing mix”. He explains that the marketing mix was first described by McCarthy called the 4Ps of Marketing which are as below:

**Product:** the target customer should be able to use the product for its main task s/he expects to use it for and it should live up to the customer’s expectations.

**Place:** Target customers should be able to find the product easily, therefore firstly it should be available where the customer is located and it should be easy to use and the expenses should be commensurate with the benefits received.

**Promotion:** all kind of promotional efforts, as Blythe (2001), states such as “advertising, public relations, sales promotion, personal selling and other tools” should be available across the organization to better introduce the product/s to the target customers,

**Price:** customer should perceive that the product represents the right value for the money (Blythe 2001). However having said that customer are always ready to pay higher price for the product which satisfy their real needs and desire and even exceed their expectation (Blythe 2001).

The 4Ps have been useful marketing tools for many years particularly in intense manufacturing of physical products. However, with the emergence of the service industry, some new factors have been added by Booms and Bitner to the previous model. These are:

**People/Participants:** in fact, all types of services are carried out by people. Therefore, the human component plays a crucial role in attracting, satisfying and retaining the customers as the people are part of the product/service the customer expects and pays.

**Process:** process is always the part of the service which is provided to the customer and customer pays for that as well. Process also makes a service more “visible” in so far as it describes something intangible and what its effects are to be which can then be compared to the final result.

**Physical evidence:** normally, services contain some sort of physical element when they are rendered to the customers. This could be for instance, inspection and certification companies which they provide certificates to the customers (Blythe 2001). What is important to be taken into account is that all these elements should be combined in the right amount in order to have a good marketing impact. In the case of our project finance packages which encompasses project monitoring as well, SGS will require almost all the mentioned factors within its package of marketing strategy, each to different extent but of course they could change as the nature, location and size of project changes. For instance SGS will have to introduce and promote that it is offering these new services to the potential markets, People, because the company has a global network of engineers, laboratories, technicians and experts which give the company a unique edge therefore it is good factor to offer the best service using the vast network of experts (and particularly the local who knows the language and culture) would be an advantage for the customers.

Noci and Lamberti (2010) point out to the claim made by Coviello et al. (1997) that two marketing practices exist, saying that marketing strategies are divided into two main parts. As they define it: “**Transactional marketing (TM) strategy** is a marketing practice where the company attempts to apply marketing mix to attract potential market and satisfy the market and **Relational marketing (RM) strategy** aims to establish long-term relationship with customers after attracting them, maintain them, and enhancing the relationships with customers and other partners in order to better meet the objectives of the company as well as to better satisfy their needs” (Noci & Lamberti 2010).
5.3.2 Developing a Strategy:

Collies and Ruckstad (2008) in his article “Can you say what your strategy is?” defines the critical components of a strategy. These components consist of objective, scope and advantage. Even though these elements might seem simple, they are sufficient to outline a strategy.

“Objective” is a point where we wish to head. The objective not only should include the end point but also a time schedule showing when we would like to reach our objective. By defining the “scope” of a business, the landscape within which it will operate will be outlined. In fact in defining scope, companies should take into account three different dimensions, customers, geographic locations and vertical integration (Collies & Ruckstad 2008).

“Scope”: This is a very critical element of the strategy as the boundaries here should be clearly defined so that managers can recognize which activities they should focus more and which ones are subordinated. Here it should be clearly stated which dimension of scope is most important for the company so that it is clear to the employees which areas will not be covered by the service offered (Collies & Ruckstad 2008).

And eventually the last element in strategy development is “competitive advantage”. This element is the essence of any strategy because it outlines what and how a company will do differently and better than others in a similar business in order to reach its stated objective, thus creating differentiation to others which might offer similar services (Collies & Ruckstad 2008).

5.3.3 Product differentiation:

Positioning the product is important. It is usually done by means of differentiation (Best 2009) which may explain why a product seemingly similar to another product is cheaper or more expensive (usually, differentiation is specifically used to explain price differences but in some rare instances it may also be used to explain why a “slimmer version” costs less). A brand name may be introduced to assist the customer in keeping the “normal product” apart from the premium product. In this case, SGS would package of project finance services within this package project monitoring will be offered as well as an independent service. However, it can differentiate itself because it draws on a vast and well-established network of technicians, engineers and laboratories which are all closely affiliated with the company (i.e. no outsourcing) which may make it very different to other companies that may not actually unite all of these skills in one company due to their structure.

So what is project monitoring specifically? It is a kind of project management where at various moments independent skilled workers may have to check up to see that the project is well underway and those resources are indeed allocated in an optimal way. Resources in this particular context could mean labour, funds as well as materials. Labour may mean that indeed the properly skilled personnel are involved at the different stages of a project. This could range from the financial administration which may require more accounting skills to actual engineers who are to lead the construction to operators who will eventually exploit the constructed object. For funds, it may mean that funds are indeed used as foreseen and that these are not branched off to non-involved parties. In some cases, extra funds may have to be raised and in others a contract may have determined a heavy fine if the project is not ended on time. And last but not least, materials must be used that indeed are required by the project in
question, i.e. steel may not be inferior grade in a building as this could jeopardise lives at a later point or cement must be of a certain quality if the building is to have a certain lifespan.

Monitoring these aspects requires countless experts and indeed, SGS has access to all such experts because of its vast network of engineers, auditors and laboratories throughout the world. Other companies may be able to offer a certain aspect of these three, i.e. the classic auditing firms (KPMG, PricewaterhouseCoopers (PwC) or E&Y) can certainly offer first-class accounting services or the large engineering companies will be able to tell whether a builder is using inferior materials (and charging for premium ones). The labour aspect is probably not as closely inspected as it should be but in fact, tremendous reputational and legal damage can come from companies who use non-registered labour or who try to circumvent country-specific rules by hiring off-the-book labour.

Darling et al. (2009) argue that to position the products or services successfully, the companies should be differentiate what they offer or are going to offer from those of competitors. The consumers should perceive the differentiation and it is meaningful. They propose two steps in successful positioning of the products:

1) “Establishing the initial market offering in the minds of consumers; and
2) Differentiating the market offering from the offerings of competitors” (Darling et al., 2009).

SGS, due to its local competencies and its varied skill sets, can offer all of these services which enables it to offer holistic services from one hand, so-called one-stop shopping. Other companies will have to engage in outsourcing which means adding another layer, which on one hand means added expenses and to some degree a loss of control. Outsourcing can also be a shield to hide behind as in the eventuality of a major blunder, companies can accuse each other and the blame is shared to some degree (a brilliant and very current example for this is Deepwater Mining which is currently struggling to contain the burst oil well in the Gulf of Mexico). However, this does not necessarily add to the company's seriousness but ultimately just damages their reputations.

5.3.4 Business strategies:

Just like any other company, SGS Zurich also should decide about its business level strategies. It should depict the path it is heading to and how it would compete on this path. Durbin (2007) has listed several business strategies in his book “Leadership” some of these business strategies and short explanation of each has been shown below. SGS will need to adopt some of them to help it to decide its business strategy:

1) Differentiation: By differentiation strategy, companies are attempting to make customers perceive that their product or service is some how different than the one already in the market.

2) Cost leadership: This strategy seeks to provide a service or service at a lower cost while it may keep the quality in a comparable level as other services or products in order to penetrate into the market and increase its market share.

3) Focus: The focus strategy aims to have the company concentrate in certain market or specific groups of the buyers. In order to focus, companies either choose the differentiation strategy or cost leadership or a combination of both.
4) **High quality:** One of the distinctive business strategies is to offer goods or service which better satisfy the target customers in terms of quality in that specific market.

5) **Strategic alliances:** One of the most strategic business decisions is to have business alliances. This can be done for various reasons such as sharing resources or dividing the market for better serving the target market or share the benefit.

6) **Growth by acquisitions:** One of the most popular and modern business strategies is to grow through acquiring other companies for various reasons such as growth in size, technology transfer, minimizing the risk of having competitors and so on.

7) **Product/service diversification:** One of the most important business strategies is to provide variety of products or service for increasing company presence therefore increasing the chance of market exploitation. This is of course much easier for companies which already have established their presence in certain markets for some of their products or services.

8) **Sticking to core competencies:** By applying this strategy, companies focus on those activities or services/product in which they are expert and more compatible. They allocate more resources on them rather than those that are not compatible in the market they serve or where they may not have enough expertise.
6 Empirical data finding

In this section some of the projects for which SGS was contracted will be analyzed. The aim is to extract the scope of work offered and try to figure out what type of services have been rendered. The reason is that it is not always clear whether this is truly project monitoring or some other related service. Here we will aim to make a distinction between these two services in the cases. Below is a synopsis of the cases:

6.1 Case studies/Projects:

In order to extract the scope of work, SGS roles and responsibilities, specifying where and in which phases of project life cycle SGS has been involved as well a the achievements gained by SGS and mainly its contractors within which SGS acted as technical and environmental advisors, some conducted projects by SGS were selected by the author as sample for analysis. The author has tried to select those projects which have been in different industries and sectors intentionally so thus there will be variety of projects which have different nature and could enrich our analysis as well final defined scope of work. First of the summery of the conducted projects were accessible in SGS main website for public however the author had the advantage to have even deeper access as he has is employed by SGS and have access to the internet. However the confidential information was avoided to be mentioned directly. The below projects were selected:

6.1.1 An international airport in India

SGS participated as one of the contractors in the development of an international airport of Hyderabad in India. In this project SGS was contracted as experienced body specialized in project finance to carry out, monitoring, document review and inspection services during construction phase. The aim has been to ensure that the milestones within this phase are completed on pre-planed and baseline schedule therefore timely completion of the entire project. In fact the construction phase consists of different milestones such as constructing a runway, terminal, control tower and etc.

The project was complex due to the complexity in the design of construction phase because the work on Passenger Terminal Buildings and Airside and Landside construction tasks had been combined. One of the major tasks has been the construction of a 72m high Air Traffic Control Tower and a 60m wide, 4.2 km long runway. Furthermore other tasks/activities such as taxi ways, approach roads, landscaping, drains and culverts’ UG sumps, a storm water collection pond and compound wall had been part of the construction phase.

SGS in this project studied all design parameters to make sure whether all required parameters defined during design phase has been taken into consideration and been adhered during the construction phase. To fulfill this task, SGS on-sites/ residents experts verified the design documentation thoroughly and compared them with actual work which was under construction. Early and thoroughly analysis and study of design documentation, the Inspection Test Plans (ITP) and Vendor Quality Assurance Provisions and Method Statements enabled the project to identify and detect possible risks and errors on the early stages of construction phase. This of course saves costly time and money for project owners. Constructing and running an airport is very critical business. There should be practically no errors. Thus one of the other SGS responsibilities in this project was to perform also through inspections of incoming raw materials and Field Quality Checks.
As per SGS website, “SGS experts ensured that the different buildings housing crucial airport aviation technologies adhered to all relevant quality and safety standards”. In this project SGS team was involved in series of civil works inspections and field inspections for all types of components such as electrical and mechanical, plumbing, fire fighting equipment and high voltage cabling. SGS was present and witnessed different materials lab testing utilized in construction phase. It attended and performed several Factory and Site Acceptance Tests. As matter of fact, SGS managed to identify several material defects and eliminated them. These material deficiencies could have negative impact on the construction as well as implementation of Terminal’s safety and quality record⁷.

Scope of work:

1) Inspection Services during Construction,
2) Project monitoring, document review during construction phase
3) Technical compliance
4) Early and thoroughly analysis and study of design documentation, the Inspection Test Plans (ITP) and Vendor Quality Assurance Provisions and Method Statements

The phase in Project finance life cycle:

The result of the case analysis shows that the conducted work has been mainly in Phase 2, Design Engineering and construction phase of product life cycle.

6.1.2 Providing rolling stock to a former East European country

This project was partially funded by the European Union. Therefore it required to meet certain criteria which were defined by EU. In this project SGS was contracted to conduct construction site supervision and documentation review. Hence SGS was asked to approve whether the strict parameters defined by EU have been met and also conduct some sort of financial control over the project as well. The project in fact was to modernize the railway transport in certain part of Northern Slovakia. this project, funded by the European Union (EU) Cohesion Fund together with the Slovak Republic.

As per SGS case summery, the project consists of “the construction and reconstruction railway track (newly built and refurbished), overpasses, underpasses with passenger tunnels, with optical cables and noise barriers for the protection of inhabited areas”. In addition the overall renewal of the rail switches and gravel bed. Moreover, refurbishing two main railway stations in terms of installing facilities such as lift for easier accessibility for handicapped people, were the other important phases of the project. Another part of the project was to place the track with a new power supply station and a complete communication system with its two switchboards as well as replacement of all old trolleys.

The project required different types of background and skills if it wanted to be completed on time and successfully. SGS team consisted of engineers, surveyor, geologist, as well as experts on bridges construction, interlocking and trolley systems, track superstructure and sub-base, utility lines, building structures, roads, quality, safety, geodetics and financial control. SGS role in this project was to act project finance technical advisor role and to ensure

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that all construction work is done according to FIDIC conditions and also it complies with Slovak internal standards, regulations. This was crucial part of the project as EU condition to funding continuity was to fulfill all respective construction criteria defined by EU.

Beside construction sites inspection, the SGS expertises was asked to manage the entire project and therefore to guarantee timely completion of the project. This encompassed reviewing and analysing the relevant project documentation, carrying out geo-technical supervision of the project sites. Another responsibly of SGS in project finance life cycle was to carry out spending supervision and cost control. Safety, health, environment and quality conditions were also controlled by SGS to ensure whether all defined criteria and standards were fully complied.\(^8\)

**Scope of work:**

1) Inspection services  
2) Construction site supervision and documentation review  
3) Regulatory compliance  
4) Project monitoring  
5) Document review and analysis, geo-technical supervision of the project sites  
6) Spending supervision and cost control

**The phase in Project finance life cycle:**

The result of the case analysis shows that the conducted work has been mainly in Phase 2, Design Engineering and construction phase of product life cycle.

**6.1.3 Pipeline project in Chile**

SGS was contracted by Citygroup to carry out technical due diligence. This would ensure that Citygroup’s potential investment meets their required and expected quality criteria for the potential pipe investments. In addition SGS was asked to carry out also technical feasibility of the projected operations for a period of 14 years.

The pipeline project was a joint venture between Endesa (Chile) and CMS Energy (USA). Project consisted of two pipelines dedicated to the gas transportation. The SGS experts carried out the initial assessment of technical due diligence and result indicated that in order to achieve the best results, their work had to be evaluated in five different important phases. These 5 phases are shown as below:

1st Phase:  
- Quality assessment based on design and engineering standards,  
- Construction inspection.

2nd phase:  
- Conformity assessment of the project in accordance of the current regulatory framework and legislation.  
- Visual inspection of conditions of the gas pipeline, supplementary facilities and sites  
- Certifying that all components satisfy a high level of structural and functional integrity.

3rd phase:
- Identifying the critical operational control variables that impact the safe delivery of gas to the power station.

4th phase:
- Identifying and calculating the pipeline operational costs
- Projection of 14 year period operational cost which would indicate an exact act transport contract with power station.

5th phase:
- Due to the fact that a 14 year period of operational cost projection would be a long contractual period, team was asked to carry out an analysis of factors which might lead to the breach of contractual aspects and the consequence and implication that these breaches might bring along.

Scope of work:

1) Technical Due Diligence: To ensure that Citygroup’s potential investment meets their required and expected quality criteria
2) Technical feasibility study of the projected operations
3) Quality assessment based on design and engineering standards,
4) Construction inspection and certification of components and functional integrity
5) Regulatory and safety compliance
6) Cost/ operation cost evaluation
7) Operation cost projection
8) Contractual obligations and
9) Study and analysis of breach implication

The phase in Project finance life cycle:

The result of the case analysis shows that the conducted work has been mainly in Phase 2, early stage of phase Design Engineering and construction phase of product life cycle.

6.1.4 A power plant in Turkey

SGS was contracted by sponsors and investors of a power plant in Turkey to carry out a feasibility assessment, due diligence, market review and project competitiveness. SGS was requested by a sponsor, the lending banks (Bank Consortium consist of 3 Turkish banks) to act the role of technical advisor.

A consortium of two Chinese engineering companies was contracted to design, engineer, procure and construct the power plant. The project was about construction of a two-unit coal-fired power plant, each with a capacity of 600MW. SGS conducted the Market, Technical and Environmental Due Diligence for the lenders. Lenders needed an experienced local expert to study the rationality and feasibility of the project before final financial agreement.

Market study of coal prices and its future projections was carried out by SGS. That was due to the fact that coal is the main source of energy for the plant and as a consequence the coal price fluctuations might significantly impact the lenders’ financial scheme and their expected and project return on their investment.

9 http://www.projectfinance.sgs.com/technical-due-diligence-conducted-for-a-951-km-pipeline-project?viewId=10068111&msvpos=10015015, accessed on 20.05.2010
**Technical due diligence** including the survey of the design and engineering, verification of specifications was conducted to confirm that no disturbances and deviations/failure will negatively impact the project milestones and projected costs.

**Environmental due diligence** was planned and carried out in accordance with Turkish law and EU legislation and other involved related regulations. To fulfill this task SGS experts reviewed and verified the environmental and health permits. Additionally SGS reviewed the input/supply and off take agreements, Engineering, Procurement, Construction (EPC) contract, the required permits and licenses to ensure their compliance to national and international standards.

SGS due diligence scope of work identified potential technical and environmental risks on time and accordingly required actions were set together with the sponsors. This avoided occurrence of these risks and accordingly sponsors avoided extra cost and delays.

**Scope of work:**

1) Market (Price study)
2) Technical Due Diligence (Conducting survey of the design and engineering, verification of specifications to confirm that no disturbances and deviations/failure will negatively impact the project milestones and projected costs).
3) Environmental Due Diligence: Conducted in accordance to Turkish law and EU legislation and other involved related regulations (reviewing and verifying the environmental and health permits).
4) Feasibility study of the project before final financial agreement.
5) Review of the input/supply and off take agreements, Engineering, Procurement, Construction (EPC) contract, the required permits and licenses and verification of their compliance to national and international standards.

**Phase in Project finance life cycle:**

The result of the case analysis shows that the conducted work has been mainly in Phase 1, development Phase and Phase 2, Design Engineering and construction phase of product life cycle.

### 6.1.5 Project Certification for an Offshore Wind Farm

SGS was requested to conduct Project Certification services for an offshore wind farm. Project Certification would help the owners of the wind farms to get the necessary permissions after fulfilling international and local standards and their requirements.

Due to their nature, offshore wind farms normally involve many risks. In fact these risks occur due to several external factors. These factors consist of the wind climate, water depth, soil, wave, water current and ice conditions. SGS was requested to certify the quality of wind farm as an independent certification and inspection company as well as to verify that the wind farm will satisfy the investor’s expectation in terms of its successful performance throughout its expected lifecycle. The project was 400MW project with eighty wind turbines each with a...
5MW capacity. The energy generated by this wind farm was estimated to be approximately 1,200 GWh (required energy power for 250,000 households and reducing CO2 emissions by 700,000 tons per year). SGS Project Certification services consisted of two phases.

**Scope of work:**

**Phase I:**
- Feasibility study within the development phase of the project;
- Verification of the design basis;
- Preliminary ground investigation reports, geo-technical reports;
- Preliminary design document on the substructure;

For design verification, all data sources which were taken into consideration for the design calculations and development of the project (the environmental, wind and maritime conditions) were checked. Furthermore, technical data were all checked and, a set of standards required to apply were defined.

SGS team investigated geophysical and geo-technical results which were conducted based on series of direct and indirect methodologies to complete the preliminary ground investigation reports and the geo-technical reports. SGS team verified all the documents and calculations. Any finding and deviations were reported. Therefore as modifications applied, and after the final check of the amended documentation, the first phase of the project was certified by SGS.

**Phase II:**
- Detailed calculations of the loads on the turbine and the support structure
- Inspections of electrical installations. In order to verify the structural integrity, parallel calculations for the loads and structural design have to be performed.
- Project supervision of the construction work (Monitoring of production, transport, installation and commissioning)
- Inspection and monitoring (periodic) during the operation phase of the wind farm

**Phase in Project finance life cycle:**

The result of the case analysis shows that the conducted work has been mainly in Phase 1, development Phase and Phase 2, Design Engineering and construction phase of product life cycle.

**6.1.6 Technical Due Diligence to Manage Risk Prior to Acquisition in Malaysia**

SGS was requested to carry out Technical Due Diligence. The result was needed by a dealer to decide prior to the acquisition of Malaysian automotive manufacturing company and its subsidiary in China.

**Scope of work:**

- The Technical Due Diligence: the result unveiled some potential risks such as high cost overruns due to machinery breakdown as well and some potential legal difficulties;

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• Verification and inspection of both factories and reporting on safety and functional conditions of all of machineries and tool assets;
• Assessment of value of machineries;
• Evaluation of buildings condition and the power consumption of electrical equipment;
• Reviewing of the environmental and safety requirement;
• Performing mineral dust emission tests\[12\];

**Phase in Project finance life cycle:**

The result of the case analysis shows that the conducted work has been mainly in Phase 1, development Phase of product life cycle.

**6.1.7 Inspection and Project Supervision of the Expansion of Power Plant, India**

SGS was requested to carry out inspection and project supervision of an expansion of a 540 MW power plant and its facilities in India. The project consists of various milestones such as building a power house (including turbine, generator and control room), as well as construction and installation of boiler, ESP and control room, and eventually building a high chimney www.sgs.com.

Moreover design, engineering and assembling of coal, water and ash handling systems, an electrical system, and a road and drainage system were on the agenda as well. SGS carried out inspection and testing services and management consulting. SGS conducted inspection of materials, machineries and equipments, documentation review, quality surveillance and supervision of construction as a pre-contract work. SGS was also supposed to review the Quality Assurance Plan. This would ensure that the project would proceed in accordance with the plan and the respective quality standards.

Resident or on-site expert of SGS carried out inspection during construction to ensure the project compliance with respective quality standards. During the construction phase of the project progress monitoring/reporting was carried out on a timely manner. This guarantied that all activities were on plan and baseline and the quality satisfies pre-planed specifications and requirements\[13\].

**Scope of work:**

1) Inspection and testing services  
2) Management consulting.  
3) Inspection of materials, machinery and equipment,  
4) Documentation review, quality surveillance,  
5) Supervision of construction as a pre-contract work.  
6) Review the Quality Assurance Plan to ensure that the project would proceed in accordance with the plan and the respective quality standards.

**Phase in Project finance life cycle:**

The result of the case analysis shows that the conducted work has been mainly in Phase 2, Design Engineering and construction phase of product life cycle.

### 6.1.8 Project Verification Services for a Wind Farm in the Netherlands

As per SGS site, the wind farm was a 60 Vestas V80 wind turbines each 2 MW and a water depth of 19 to 24 meters. The wind farm planned to generate 400 GWh annually (generating power energy to 125,000 houses) and reduction of 22,500 tons CO2 emissions each year.

SGS was requested to carry out quality and progress monitoring of the project to identify the possible risks to avoid project completion delays. SGS also carried out Technical Due Diligence to verify whether the wind farm will perform as expected and successfully within its lifecycle. Moreover SGS was supposed to review the design of the steel foundation. As per experience of SGS project finance team, many failures occur in wind turbines are associated with the low quality or wrong choice of material or faults in welding, project monitoring during the construction phase would be essential to unveil the risks and faults.

SGS conducted Non-Destructive Testing as well during the projects and their result were recorded, reviewed and reported. SGS helped owners to identify potential technical and environmental risks and enabled them to take proactive actions.\(^{14}\)

**Scope of work:**

1) Design review,
2) Document review
3) Manufacturing surveys
4) Monitoring the Quality and progress of the project to identify the possible risks to avoid project completion delays.
5) Conducting Technical Due Diligence to verify whether the wind farm will perform as expected and successfully within its lifecycle,
6) Reviewing the design of the steel foundation,
7) Conducting Non-Destructive Testing during the projects

**Phase in Project finance life cycle**

The result of the case analysis shows that the conducted work has been mainly in Phase 2, Design Engineering and construction phase of product life cycle.

#### 6.2 Interviews

Firstly due to lack of pool of experienced experts in project finance services within SGS and because it is still considered as young service and secondly due to the fact that some interviewees rejected to take part in the interviews or reacting to the explanatory questionnaire, the result of the interview is limited to a few number of participants. Having said that, the team interviewed was the most experienced one within the group.

They defined the project finance life cycles slightly differently in comparison than the one illustrated in figure 5-1. For them a project’s finance life cycle, particularly construction

projects, there is no “start-up” phase. They instead proposed to separate Design and Engineering from Construction and place Construction as a separate phase. Therefore their proposed project finance life cycles phases were defined as:

*Phase 1: Development;*
*Phase 2: Design & Engineering;*
*Phase 3: Construction;*
*Phase 4: Operation & Maintenance;*

Therefore, our Project Monitoring activities could extend to the other phases as well. It begins in the 2nd and 3rd (Engineering & construction) phase and could, although rarely, extend into the 4th (O&M) phase. Some other services were also added to our preliminary table of phases and scopes in each phase. These are “Technical Staffing” for instance which could be added in phase 3 and 4 and “Tender Support” in phase 1 and 2. The rest will be illustrated in Table 7-1, depicting the phases of project life cycle. Therefore the scope of the final table will be defined based on the result of interviews as well as the result of case analysis as well as taking into account the literature scope where we could have the necessary capacity and resources to offer and which might be interesting to the customers.

Concerning the marketing strategy, interviewees generally mentioned that Clients would consist of banks and investors. Services are customized to each entity’s needs depending on their role within the project as well as the amount of risks they are undertaking.

They conduct marketing through mailings as well as trying to personally present SGS project monitoring and project finance services to the interested potential customers.

### 6.3 Summary

Just to summarize this section, the aim has been to highlight the most used scope of work by SGS group within various projects already conducted. Moreover try to find the position of the conducted scope of work within the project finance life cycle which was already defined using our theoretical framework. As per the scope and various phases defined by theory, it was found that almost most of projects have been within phase 1, phase 2 of the project life cycle defined based on theory in figure 5-2. This aim came true.

The other aim has been to validate the above defined scope as well as the result of our case study findings. This was done by interviews we had within the group. The result of interview indicated that except than certain points/ defined scope, most of the already defined scope was correctly defined. One of the main changes resulted by interview has been related to the modifications in the phase of the project finance life cycle. Therefore the defined lifecycle change to be defined as:

*Phase 1: Development;*
*Phase 2: Design & Engineering;*
*Phase 3: Construction;*
*Phase 4: Operation & Maintenance.*

Taking the offered modification, we could validate our defined scope within each phases of project finance life cycle and we could use it to consolidate the final version in analysis section.
7 Analysis

7.1 Technical scope at aggregate level:

The result of case studies analysis and the performed scope of work in each of these projects summery have been illustrated in table 7-1. In my analysis I have divided the scope into two parts, project finance services and project monitoring even though project monitoring is considered as one of sub-scopes. It should be noted that the obtained result may be different if the case analysis are done by different person. The result shows that about 50% of the projects were assisted purely with Project monitoring services while 75% were in the area of project finance services. In the below analysis has been tried to figure out which activities were related to project finance services and which project monitoring. For the table below then we will be able to define our final scope of work for each of the mentioned services.

<table>
<thead>
<tr>
<th>Analysis of the cases and their scope of work performed</th>
<th>PM</th>
<th>PF</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Case 1: An international airport in India</strong></td>
<td></td>
<td>√</td>
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<tr>
<td>• Inspection Services during Construction;</td>
<td></td>
<td></td>
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<tr>
<td>• Project monitoring, document review during construction phase;</td>
<td></td>
<td></td>
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<tr>
<td>• Technical compliance;</td>
<td></td>
<td></td>
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<tr>
<td>• Early and thoroughly analysis and study of design documentation, the Inspection Test Plans (ITP) and Vendor Quality Assurance Provisions and Method Statements.</td>
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<tr>
<td><strong>Case 2: Providing rolling stock to a former East European country</strong></td>
<td></td>
<td>√</td>
</tr>
<tr>
<td>• Inspection services;</td>
<td></td>
<td></td>
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<tr>
<td>• Construction site supervision and documentation review;</td>
<td></td>
<td></td>
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<tr>
<td>• Regulatory compliance;</td>
<td></td>
<td></td>
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<tr>
<td>• Project monitoring;</td>
<td></td>
<td></td>
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<tr>
<td>• Document review and analysis, geo-technical supervision of the project sites;</td>
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<tr>
<td>• Spending supervision and cost control.</td>
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<tr>
<td><strong>Case 3: Pipeline project in Chile</strong></td>
<td></td>
<td>√</td>
</tr>
<tr>
<td>• Technical Due Diligence: To ensure that Citygroup’s potential investment meets their required and expected quality criteria;</td>
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<tr>
<td>• Technical feasibility study of the projected operations;</td>
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<td>• Regulatory and safety compliance;</td>
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<td>• Operation cost projection;</td>
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<tr>
<td>• Contractual obligations;</td>
<td></td>
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<tr>
<td>• Study and analysis of breach implication.</td>
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<tr>
<td><strong>Case 4: A power plant in Turkey</strong></td>
<td></td>
<td>√</td>
</tr>
<tr>
<td>• Market (Price study);</td>
<td></td>
<td></td>
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<tr>
<td>• Technical Due Diligence (Conducting survey of the design and engineering, verification of specifications to confirm that no disturbances and deviations/ failure will negatively impact the project</td>
<td></td>
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</tbody>
</table>
- Environmental Due Diligence: Conducted in accordance to Turkish law and EU legislation and other involved related regulations (reviewing and verifying the environmental and health permits);
- Feasibility study of the project before final financial agreement;
- Review of the input/supply and off take agreements, Engineering, Procurement, Construction (EPC) contract, the required permits and licenses and verification of their compliance to national and international standards.

**Case 5: Project Certification for an Offshore Wind Farm**

- Feasibility study within the development phase of the project;
- Verification of the design basis;
- Preliminary ground investigation reports, geo-technical reports;
- Preliminary design document on the substructure;
- Detailed calculations of the loads on the turbine and the support structure;
- Inspections of electrical installations. In order to verify the structural integrity, parallel calculations for the loads and structural design have to be performed;
- Project supervision of the construction work (Monitoring of production, transport, installation and commissioning);
- Inspection and monitoring (periodic) during the operation phase of the wind farm.

**Case 6: Technical Due Diligence to Manage Risk Prior to Acquisition in Malaysia**

- The Technical Due Diligence: the result unveiled some potential risks such as high cost overruns due to machinery breakdown as well and some potential legal difficulties;
- Verification and inspection of both factories and reporting on safety and functional conditions of all of machineries and tool assets;
- Assessment of value of machineries;
- Evaluation of buildings condition and the power; consumption of electrical equipment;
- Reviewing of the environmental and safety requirement;
- Performing mineral dust emission tests.

**Case 7: Inspection and Project Supervision of the Expansion of Power Plant, India**

- Inspection and testing services;
- Management consulting;
- Inspection of materials, machinery and equipment;
- Documentation review, quality surveillance;
- Supervision of construction as a pre-contract work;
- Review the Quality Assurance Plan to ensure that the project would proceed in accordance with the plan and the respective quality standards.

**Case 8: Project Verification Services for a Wind Farm in the Netherlands**

- Design review,
- Document review
- Manufacturing surveys
- Monitoring the Quality and progress of the project to identify the possible risks to avoid project completion delays.
- Conducting Technical Due Diligence to verify whether the wind farm will perform as expected and successfully within its lifecycle,
- Reviewing the design of the steel foundation,
- Conducting Non-Destructive Testing during the projects

| Total  | 4/8 | 6/8 |

Table 7-1: Scope of work analysis
PF=Project Finance; PM= Project Monitoring

The analysis of the carried out projects also helped to have the practical scope of work based on the experience with every one of this service in order to compare with literature already reviewed in our literature section. Furthermore this will help us to better define our marketing strategy because there might be different entity to be interested in each aspects of these services. The case studies results will be used together with result of interviews to define the scope of work as well which will be as package called “Project Finance services” within which project monitoring will be offered as well either individually or together with the pool of other services.

### 7.2 Scope of work

Due diligence and feasibility studies are crucial tools to identify the potential risks (Hoffmann 2008; Reichardt 2007). Reichardt (2007) claims that non financial aspects of due diligences such as technical, environmental and socio-economic are often not being taken into account during due diligence process. Hoffmann (2008) argues that due diligence is a process which is done in the following aspects of the project: “legal due diligence, technical due diligence, environmental due diligence and financial due diligence”. Taking into account the result of detail analysis of SGS conducted projects as well as Hoffmann’s statement, we can thus, outline SGS scope of work for project finance services. As the figure 7-1 indicates SGS can only be involved as technical and environmental advisor and provide the lenders with technical and environmental feasibility study and due diligence before they pursue their investment. Therefore different aspects of a contract and even participants themselves can be analyzed in order to identify the project technical and environmental risks. Here SGS can act as consultant for the lenders in order to minimize technical and environmental risks of the investment. Therefore as per Hoffmann’s list of participants, SGS can offer engineering consultancies, raw material, it may also act as market consultants as well environmental consultant but will not get involved in legal and financial advisories.

![Figure 7-1: Scope of work of SGS](image)
Hence, SGS can offer technical advises concerning technology used in facilities, equipment, and production process such as “analysis of technical processes, design of the plant, construction, various permits, budget of construction, construction timetable, operation and maintenance costs, plans and timetable of maintenance and revenue projections (Hoffmann, 2008).

Moreover it can help lenders by reducing costs due to modification or adjustment of certain or all equipment to meet new requirements, standards or norms or eliminate various types of penalties due to civil and criminal actions and law violations which may have a significant negative impact on the project and the cost of the project. And make sure that environmental law and regulations are also being applied to the product of the project as well the waste it may produce beside the project itself. Therefore SGS can offer environmental feasibility and due diligence on environmental impact of the project on elements such as “Site, Air, Water, Plant and animal habitants, Health hazards, Noise, Aesthetics, Histories and cultural significance, Transportation, public services and utilities, indigenous people” (Hoffmann, 2008). It can make sure that all required permits have been in place. This is very important as lack of any required permit could lead to delay in project completion or even permanently suspension of the project. And accordingly to see if world Bank environmental standards have been taken into account in design and construction phases of the project.

7.3 Position of Project Monitoring within Package of offered project finances services:

Project monitoring services can be normally offered in phase 2, design and engineering and phase 3, construction and can be extended to phase 4, operation phase. This service will help the lender, investors and eve construction contractors to monitor and control the project regularly and be alarmed of the project risks on time and before it is too late to tackle to problem. It will report status of the project progress periodically. It will ensure that whether is progressing on scheduled time, on pre-planned and foreseen budget and with the quality which has been agreed upon in the contract. Thus it will help to ensure that project implementation is being carried out properly it is on right track to achieve its foreseen and expected objectives. Therefore as Mahaney and Lederer (2009) argument the ultimate intention of monitoring is to collect information and this information can help the lenders, investors and contractors ensure their project is within predetermined baseline and timetable and agreed upon outcome/result within allocated and accepted budget limit, quality expectation, help them to make a correct decision on the right time and ensure that the project will achieve its required objectives. Therefore reduce project failure.

As defined by Mahaney and Lederer (2009), there are some tools, techniques to monitor a project which can be used also by SGS to offer the project monitoring services. Therefore SGS can identify the risks by analyzing project plan, critical path, Gantt charts, internal posting of project progress for reviews, periodic comparison of actual costs to estimated costs, periodic comparison of actual results to planned results, periodic comparison of project progress to schedule, project progress reports and time reports periodically produced by developers and etc. This will help the lenders, investors and contractors to ensure that the risk are unveiled in early phase before it is toll late to remove the risks.
7.4 The offered services in each phase for Project finance:

As we now know that SGS scope of activities will not exceed as technical and environmental advisories and taking into theory, case studies, already defined in house scope of work\textsuperscript{15} and interview, we can define the below scope of work were defined as a platform for developing the services. As illustrated below in table 7-1, our scope of activities will be placed within 4 phases of project or project finance life cycle.

![Figure 7-2: Final defined project life cycle](image)

In Phase 1 of project finance services, SGS Zurich will offer, Technical, environmental due diligence as well as technical and environmental feasibility study as well project management services for which sub-tasks or activities have been defined as well. In this phase SGS Zurich will neither get into legal and financial due diligence nor economic feasibility study as these are not the area of expertise for SGS. However this could be done together with consulting companies such PWC; KPMG as E&Y. Project management can be offered but in a limited fashion.

In phase 2, design and engineering, various services will be offered such as project certification, installation survey, project management, technical compliance and etc. having said that our project monitoring service will have demand in this phase within which we will offer project progress review; Identification/analysis of major risk factors; periodic comparison of actual costs to estimated costs; periodic comparison of project progress to schedule and etc. this is very important phase for SGS Zurich to focus on its marketing strategy.

Phase 3, construction phase is also very critical phase for contractors as well as investors. Therefore it would be a very good niche phase for SGS Zurich. Here SGS Zurich can offer project monitoring in more sophisticated fashion. Project management, expediting as well as technical staffing would b very interesting activities for the customers to offer.

\textsuperscript{15} http://www.projectfinance.sgs.com/sgs-ind-project-finance-services-en-10.pdf, [accessed 1 Apr 2010]
In phase 4, even though it may not seem to be very interesting market for SGS however experience has shown that operational performance monitoring and technical stuffing might be interesting activities to focus.

Table 7-1 shows the detail scope of work defined for each phase. Of course these are general activities and of course could be modified according to the project nature and customers’ needs as well as terms of contracts.
<table>
<thead>
<tr>
<th>Phase 1: Development</th>
<th>Phase 2: Design &amp; Engineering</th>
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<tbody>
<tr>
<td>• Technical feasibility &amp; due diligence;</td>
<td></td>
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<tr>
<td>o Analysis of technical processes;</td>
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<tr>
<td>o Site assessment;</td>
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<tr>
<td>o Review of design of the plant;</td>
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<tr>
<td>o Review of various permits;</td>
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<tr>
<td>o Technical contract evaluation</td>
<td></td>
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<tr>
<td>o Specification verification</td>
<td></td>
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<tr>
<td>o Supplier and subcontractor qualification review;</td>
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<tr>
<td>o Review of budget of construction;</td>
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<tr>
<td>o Review of plans and timetable of maintenance;</td>
<td></td>
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<tr>
<td>o Review of regulatory compliance;</td>
<td></td>
</tr>
<tr>
<td>• Environmental feasibility &amp; due diligence:</td>
<td></td>
</tr>
<tr>
<td>o Environmental impact of the project</td>
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<td>o Review of Permits &amp; Regulatory compliance;</td>
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<td>o The equator principles;</td>
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<td>• Project management</td>
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<td>o Identification/analysis of major risk factors (affecting project progress);</td>
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<td>o Critical path analysis</td>
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<td>o Tender support</td>
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<td>• Project Monitoring;</td>
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<td>o Project progress review (measuring the progress of the project’s activities);</td>
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<td>o Periodic comparison of actual costs to estimated costs;</td>
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<td>o Review of permits and licenses</td>
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<td>o Project progress reports; (Review &amp; Issuance)</td>
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<td>• Project management</td>
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<td>o Budget control</td>
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<td>o Accounts review</td>
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<td>o Tender support</td>
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Phase 3: Construction

- **Project Monitoring:**
  - Project progress review (measuring the progress of the project’s activities);
  - Project progress reports; (Review & Issuance)
  - Construction supervision
  - Periodic comparison of actual costs to estimated costs;

- **Project Management:**
  - Construction management
  - Quality Management
  - Budget control
  - Accounts review

- Health, Safety and Environment (HSE) monitoring;
- **Post completion audit of the project or “Final Acceptance Audit”;**

- Technical staffing
- Environmental regulatory compliance;
- Expediting;
- Health, Safety and Environment (HSE) monitoring;
- The equator principles monitoring;
- Witnessing and monitoring of performance test;

### Phase 4: Operation & Maintenance

- **Operational performance monitoring:**
  - Output and supply supervision
  - Regulatory compliance;

- Technical staffing
- Environmental regulatory compliance;
- Health, Safety and Environment (HSE) monitoring;
- The equator principles monitoring;

| Table 7-2: Scope of work in each phases of Project finance life cycle

### 7.5 Target Market for Project Finance Services:

To define our market for project finance services, we need to use our defined scope in section 7.2 as well as the final defined version of project finance life cycle.

These services could be mainly demanded by the funding entities (banks or syndicates of banks who are financing non-recourse debt and sponsors or pool of sponsors who are undertaking equity financing). This is due to the fact that prior to undertaking financial obligations, banks and equity funders or sponsors usually like to evaluate the investment project in terms of feasibility and possible risk this investment may involve or could occur in the future. Therefore, our project finance services would be very interesting for international organizations and syndicates of banks who are undertaking non-recourse debts as well as sponsors who are undertaking equity funds.
### 7.5.1 Summary of Target Market

- Banks/ syndicates of banks and Institutional lenders funding non-recourse debts;
- The bond Markets (individual and institutional investors) (Hoffmann 2008);
- Investment funds;
- Contractors in Construction phase;
- Governments (Governmental Grants)
- Insurance companies;
- Sponsors which are providing funding equities;

### 7.6 Target Market for Project Monitoring Services:

As we explained in figure 5-1 of section 5, in project finance, the Project Company is in the center and as main player, allocates risks to different parties based on their capability. In this risk allocation mechanism, risk control should be undertaken by those parties for which the ignorance or neglect of these risks could delay the entire project. As explained in figure 5-1 of Sorge (2004), banks or syndicates of banks are responsible for guaranteeing on-time delivery of their debt finance obligations and Sponsors also are responsible for fulfilling their on-time delivering their equity promises. Any possible neglect of one of these entities of fulfilling their contract undertaking could jeopardise the on-time termination of the entire project in the construction and operation phases which would not be compensated any more. On the other hand, these entities would also like to make sure that their investments are allocated correctly and within the investment’s contractual terms.

Therefore, the interested entities for project monitoring services would most likely be contractors who are contracted for construction phase as well as banks/ syndicates of banks and sponsors who could also hire a neutral third party inspection company to monitor the contractors activities in order to avoid any delay or deviation in the work.

#### 7.6.1 Summary of target market

- Banks/ syndicates of banks and Institutional lenders funding non-recourse debts;
- Contractor/ contractors in Construction phase;
- Investment funds;
- Insurance Companies;
- Sponsors for funding equities;

### 7.7 Our Overall Marketing Strategy

Our marketing strategy is designed based on the definition provided by Collies & Ruckstad (2008) mentioned in the literature section. Hence our strategy is to be the most known and reliable company which is offers project finance and project monitoring services in one package in Switzerland within the framework of the defined scope of work outlined above, i.e. by focusing on the defined market using SGS’s brand name, large network of expertise and pool of various engineers around the world
7.8 **Marketing Strategy for Project Finance & Project Monitoring Services**

Our marketing strategy is designed around the customer and its main aim is customer satisfaction. This will be achieved through the strategies below.

### 7.8.1 Positioning of the services

In outlining our positioning strategy we will refer to business strategies stated by Durbin (2007) mentioned in the literature section. Below you will see some of these strategies and short explanation of each. Depending on the project, SGS may adopt a few of these or all of them.

- **Differentiation:**
  By applying the differentiation strategy, SGS Zurich will attempt to do its best so that the customer perceives the offered services to be unique and different than those of competitors. Its advantages are its vast network of experts around the world and its experience in inspections, testing, and certification services.

- **Cost leadership:**
  SGS Zurich primary aim is customer satisfaction; this means that the quality of the work is not sacrificed for any price under any circumstances. Due to its vast global presence both as operating units and its network of laboratories, SGS does not need to outsource services which usually mean that the customer saves money in the long run.

- **Focus:**
  Our primary aim is to focus on the markets defined above and using the already existing pool of expertise. SGS Zurich will mainly concentrate on the Swiss market.

- **High quality:**
  One of the main advantages of SGS group is that it is a benchmark in inspection, certification, verification and testing areas. It is renowned for high-quality services. Having this in mind our customer will be served exceeding their expectation to better satisfy their needs.

- **Strategic alliances:**
  SGS Zurich may choose some strategic alliances with other Group companies for various reasons, such as sharing resources or dividing the market to better serve the target market or share the benefit as well exchange know-how. It has already tied its relationship with SGS Austria’s project finance services departments which is one the most experienced in the Group. We will continue to look for new strategic alliances.

- **Sticking to core competencies:**
  SGS Zurich will not enter into financial consulting aspects of project finance services. It will only act within the framework of scope defined in table 7-2. This will help SGS Zurich to focus better on those activities or services for which it has the necessary resources and which fit its scope of activities and SGS Group’s overall strategy.
All the above-mentioned elements will help SGS Zurich to establish long-term relationships with its customers aiming to create advantage for its customers by adding value in the form of new services sold to the customer.

### 7.8.2 Price

As already mentioned in the cost leadership section, the prices of these services will be set around the customer satisfaction, also taking into account the formula defined by SGS group. For the price-setting process, customer satisfaction is a very important element to take into consideration.

### 7.8.3 Place

The advantage of SGS Zurich would be that SGS is known worldwide and is a benchmark in inspection services; therefore it will not need high initial investment to introduce its new services to the market. However, informing the customers about such services offered by SGS Zurich shall be a top priority. To fulfill this critical task of being connected to the potential customers who might need SGS services but may not be informed of such services within SGS Zurich, SGS Zurich will apply the following channels.

- **Sales team:** SGS Zurich will contact its customers by means of e mail, telephone and try to make them aware of our new products following a list of customers which will be produced for this purpose.
- **Direct E-mail/mail:** Special group of potential customers will be selected and contacted via post or e-mail.
- **Direct calling:** call centers will be hired to contact the list of customers to inform them about our new product and refer them to our office for more complete and technical questions.
- **Website:** our website will be updated accordingly as well to give necessary instruction and information to the potential customers.
- **Flyers:** flyers specifically for Project finance services and project monitoring will be prepared. Flyers will be sent to those entities who are interested to you services an introductory promotional activities of our marketing effort. Interested customers, will be provided an individual session to present our services in detail.

### 7.8.4 Promotion:

SGS Zurich will promote its newly defined package of services mainly through:

- **Direct marketing:** Key potential customers will be contacted via mail, e-mail, and telephone. They will receive promotional flyers about the services. Those who are interested to have us present our service or to have personal meeting, we will give a visit.
- **Public relations:** SGS will try to introduce the services by publishing some articles in some business or management magazines to introduce our products.
- **Customer visits:** As mentioned, direct customer visits will be arranged for presenting to those who are interested about the detail of the services.
- **Governmental sources:** Governmental project agencies, such as SECO will be contacted as well to create the linkage between us and interested entities.
- **Chamber of commerce:** We may arrange presentations at the chamber of commerce to introduce the services.

- **Presence at trade shows:** SGS will be present at trade shows that specifically focus on large-scale building projects and offer its services there in person, thus allowing for a more personal approach.

Therefore, our marketing strategy will be mainly based on Noci and Lamberti’s (2010) strategies called “Transactional marketing (TM)) and Relational marketing (RM)”strategies. The TM strategy will use the 4 Ps to attract customers, i.e. by keeping our relationship with customers at a constantly high quality and trying to build a life-long relationship based on customers concerns and their needs. With RM we will have more interaction with customer through different contact means to build up a long term relationship.

In addition to the above tools and strategies, one of our most strategic and important marketing tools would be to listen to our customers effectively in order to find out their real needs and service them accordingly (Bohn 1999). As Bohn (1999) claims, this increases trust and credibility and will help enhance the long-term relationship with the customers.

However having said that we will not adhere to one or only one combined set of strategies as mentioned above but rather, as we are professional service company, we will apply and practice different types of marketing strategies which will significantly depend on customers’ wishes and expectations. We will react to changes and changing needs of customer flexibly. This will only come true by building long-term relationship with our customers (Reid 2008). Furthermore, our services will be offered by competent people, who focus on problem-solving and providing advice. We will not only talk, but we will also listen emphatically (Reid 2008).

### 7.9 Summary

As mentioned in previous section, the result of cases analysis as well as the interviews helped us to modify our theoretically defined phases of project finance services and new detailed scope of work for each phases and subsequently validate and consolidate the detail scope of work already defined. After establishing the final and validated the scope of work required for each service (see table 7-2), we could identify the target market based on our theoretical framework and interviews and of course the projects for which SGS was contracted. Thus, we could define our target market for each service. Defining the market, helped us to establish our marketing strategy required for each services as well as how to efficiently position our services defined in the respective target market.
8 Discussion:

This work was conducted specifically for SGS Zurich even though the result could be used by other organizations as well. Therefore this work was prepared in a way that could be used primarily as a guideline for SGS group and therefore it should not be considered as purely scientific and research-based work. Of course, already existing previous scientific books and articles were used to outline this work’s theoretical framework and try to improve the operational processes and scope of work of these services in practice. In this work, the author was asked to answer the following questions:

How could project finance (PF) and project monitoring (PM) services be developed as two new services within SGS Zurich? How could they be marketed and introduced to the potential markets which could include investors ranging from governments, banks, financial institutes to private investors? What would be the benefit and advantage of this service for the investors?

How could project finance (PF) and project monitoring (PM) services be developed as two new services within SGS Zurich?

Through literature studies, cases analysis, already defined in house scope of work as well as interviews (even though very limited), we could develop the scope of work for each of mentioned services. Prior to this work, the distinction had not been outlined properly. For development, of course, literature was used as a basis to identify the scope of work. I added the comments and input received from the case studies as well as the interviews with experts in these areas. As a result, a new life cycle was defined for the project finance’s life cycle and some modifications were made on previous existing model within the group to define project monitoring as a separate service which fits the package of project finance services offered by SGS.

However, projects are live entities, they change regularly for various reasons such as the emergence of new technology, new disciplines, breakthrough inventions, political and economical situation of the countries and etc, and every change could bring new risks but also new opportunities which is why there is always room for improvement and modification of the defined scope.

In some cases, the scope of a project is changed and tailored to the (new) nature of the projects and customized to meet market demands and real needs of the customers which range from syndicates of banks and sponsors to contractors and engineering firms as well as host country governments.

SGS Zurich currently has clearly outlined the scope of work for these two services and has a clear picture of which aspects of project finance services fit in the business scope of SGS and therefore which service can be offered in which phases of project finance services. Of course it should not be forgotten that this is a very generic scope of work defined for the PF and PM. Additional activities and work might be added according to the need of the customer with the capacity and capability limit of SGS Zurich.

How could they be marketed and introduced to the potential markets which could include investors ranging from governments, banks, financial institutes to private investors?
To answer this question, the outlined scope of work for each service helped define the target market. The target market ranges from contractors in construction, banks/syndicates of banks for funding debts to sponsors that provide funding equities and even governments.

The target markets would be more or less the same for both services, however, the involved entities’ intention for contracting SGS for rendering these services might be different. For instance, for project monitoring, contractors would be very keen to have an expert company such as SGS monitor the entire construction or even design and engineering phases because any delay in this phase may yield heavy penalties for the contractors. SGS might also be hired by syndicates of banks to render project monitoring services, not because they may face penalties, but to control contractor activities to make sure their investments are used and allocated correctly, according to contractual agreements and on planned budget with the scope of agreed quality level. As such entities are concerned with their return on investment, they would like to make sure that there will be no delay in planned completion date as any delay will jeopardise the entire project, return on investment and may even lead to a permanent suspension of the projects.

Furthermore, the defined aspects of project finance services could also be interesting for investors to assess the risk by having SGS Zurich conduct various feasibility studies before they even enter any financial undertaking and agreements and finalize their investments.

Outlining the target market helped defining the relevant marketing strategy for these potential markets. These targets were based on experience and literature. However, the world is still facing a financial crisis, which is why there might not be so much interest for investment by host countries, banks or sponsors which is why the marketing effort might not yield prompt results. On the other hand, this negative climate has caused companies, banks and governments to be more cautious and sensitive about the cost of suspended, on-going or future projects which could be good opportunity for SGS Zurich to introduce the benefits of these services to investing bodies.

In particular, this service could add a great value for those projects which were suspended due to the crisis. For instance, many construction projects were suspended in Dubai and for every day of suspension, contractors are facing penalties and investors are losing funds, which is why it is necessary to re-evaluate their feasibility and restart the work.

The result of case studies proved that project finance and project monitoring services could, to a great extent, avoid both the risks before entering into any investments agreements and also unveil the possible risks during the early stages of development, design and engineering, as well as during the actual construction phase of the project’s life cycle. Having on hand an independent third party will help reassure investors, sponsors and contractors that the project will be completed on agreed date, on agreed budget, with the expected quality expectations without facing any penalties and therefore return on investment is guaranteed as well.

SGS Zurich will not get involved in financial and legal aspects of project finance services such as economic feasibility studies including construction budget, revenue projections, operating budget, debt service, working capital, valuation and ratios as currently the human resources are not available but also because this is already a crowded field. Possibly, strategic alliances could be attempted in this field. Moreover, it will not be involved in any kind of legal advisory. This of course might be done together with companies such as PwC, KPMG and E&Y which are involved in project finance consultation services. In fact, those
companies, such as PwC, KPMG or E&Y, might be interested in an alliance with SGS because each company works in its area of specialization and expertise, thus enhancing customer satisfaction for both.

- *How will investors benefit from such a service package?*

The result of study shows that investors could benefit significantly from utilizing these services:

- To avoid various technical and environmental risks prior to investment, during and implementation and construction as well as operation;
- To complete the project on time, on specified budget and on expected quality level;
- To avoid cost over run and penalties;
- To have the work done by an expert, neutral party;
- To avoid fraud by contractors particularly if the project is far way;
- To have regular, fast and reliable presence during and after the construction;
- To ensure that the return on investment is within expectations.
9 Conclusion:

The aim of this thesis work has been to clearly define the concepts of project finance and project monitoring. This was achieved by studying literature in this area. Consequently, project life cycle phases and the position of project monitoring within this cycle and also scope of work for each of two services were defined. These were primarily defined by using the theory and then they were modified based on the case studies and analysis of the scope of work in each project as well as the input received from interviews. All helped to define a new scope for project finance services which includes project monitoring in its second phase, and third phase, design and engineering phase and it sometimes is extended to the 4th phase which is operation and maintenance. Of course the author believes that there is always room for constant improvements and modifications as well as adjusting to new situations and to new projects, taking into account the changing capability and resources within SGS.

Subsequently the target markets were defined for each service according to the scope defined and accordingly, packages of marketing strategies were established to introduce these services to the potential markets.

The work also pointed out the benefits to investors or investing entities and sponsors, in fact all parties involved, from the utilization of such services offered by SGS Zurich or any other independent company.

The defined services will assist investing entities to eliminate or minimize the risks involved in different phases of project finance life cycle such as Development risks, Design and Engineering risks, Construction risks as well as Operation and Maintenance risks. This will ensure that project complete on planned schedule, on projected budget, on expected quality and return on investment, on time servicing the debts, benefits to sponsors and also avoids penalties, cost overrun and satisfying all involved parties expectation.
10 Future studies and recommendation:

Project finance is a complex. It requires regular research and close contact and efficient communication system amongst SGS affiliates and the competence center. It should regularly take into consideration the new needs arising in different markets and fit them into its service package if it wants to succeed.

Furthermore, the author believes that since SGS is not acting as a consulting body in domains such as legal and financial feasibility studies, this could be good opportunity for SGS and also for other companies such as PwC, KPMG as well as E&Y to come together and act in alliances to offer a full set of services to better satisfy the market.

As stated before, this thesis work should be considered as a basic guideline. It aims for to familiarize SGS and other SGS affiliates with the concepts of project finance and project monitoring and help initiate these services at their affiliates. Of course, this work was purely done for SGS Zurich. The author believes that this type of work is never complete which is why it is open for comments, recommendations, new ideas and even criticism.

As this work was conducted specifically for the company within which the author is working, the author learnt that it is not always easy to get information from the people involved within the organization. The author experienced that sometimes people within the organization consider the improvement process as a threat to the already defined procedure which makes the data collection process difficult. This needs reconsideration in organizational culture. Furthermore, what was learnt from conducting this thesis work is that efficient communication between experts in this business and exchange of real experience and using theory as background helps to define the service more professionally.

In the end, the author believes that this thesis work can be used a platform for basic development of these services not only in the author’s own affiliate but also in SGS group and opens a new path for interested parties particularly in the SGS holding to continue this work for further research while on the one hand it makes people familiar with theoretical concepts of project finance and monitoring services and on the other hand indicating the clear scope of work for the experts and marketers to know in which points they have to focus more and how to proceed.
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Annex 1: Business Plan

Business Plan

For
Project Finance & Project Monitoring Services
Executive Summary

Company and industry
SGS Zurich is a branch of SGS Group, the world’s leading and largest inspection, testing, verification and Certification Company. From the very beginning, SGS has been and still is the benchmark in regard to quality. The latest statistics prove that SGS’s number of employees has reached 59,000. Furthermore, SGS is active in almost 1000 offices and laboratories around the world.

More than a century ago, this company started as a grain inspector. Today, SGS consists of 10 business segments active worldwide. Its current structure dates to 2001. Despite various ups and downs, the company is still considered to be the leader in this industry. It has achieved this by continuously improving its services, thus allowing its customers to mitigate their sometimes considerable business risks. According to its website, the company offers services to the following industries:

Exhibit 1: SGS Core services and Business lines

SGS Zurich is the operational unit of SGS in Switzerland. SGS Zurich’s portfolio includes CTS, IND, SSC, GIS, Automotive services, which will be briefly elaborated later on in the divisions and product section. SGS Zurich, in turn, includes 3 operational sites in Zurich, Geneva and Locarno. SGS Zurich services are limited to: Consumer Testing Services (CTS), Governments and Institutions Services (GIS) Industrial Services (IND), Systems and Services Certification (SSC)

16 http://www.sgs.com/about_sgs/in_brief.htm, Accessed on 01.05.2010
**Product/Services**

*Project finance services* is a package of services which would be offered by SGS Zurich by which it will assist investors, owners and sponsors to determine beforehand whether a project is even feasible from an economic, financial, ecological, political or cultural point of view. It ideally should identify all the risks in the various phases of a project’s lifecycle and therefore ensure that the project will be feasible and sustainable from a financial point of view over its lifetime and whether it has indeed taken into account all possible risks.

*Project monitoring services* is a step further along the value chain as the decision to design, construction and implementation has already been taken. At this point in a project’s life cycle, it is a question of having a third party control the status of the implementation of the project, operation as well as costs and provide reports as to whether the project's progress is on the previously determined timeline and if not, to surface and report the reasons in order to take corrective actions at early stages to avoid any delay in completion of the project and consequently, penalties due to these delays. Depending on the scope defined in the original contract, the service may include recommendations on how to negotiate such set-backs.

**Market analysis**

- **Target Market for Project finance services:**
  To define our market for project finance services, we use our defined scope in section 7.2 as well as the final defined version of project finance life cycle.

  These services could be mainly demanded by the Banks (syndicates of banks who are financing the non-recourse debts and sponsors or pool of sponsors who are undertaking equity financing. This is due to the fact that prior to undertaking financial obligations, banks and equity funders or sponsors would like to evaluate the investment project in terms of feasibility and possible risk this investment may involve or could occur in future. Therefore our project finance services would be very interesting for International organizations and syndicates of banks who are undertaking non recourse debts as well as Sponsors who are undertaking equity funds.

  **Summary of Target market:**
  - Banks/ syndicates of banks and Institutional lenders funding non-recourse debts;
  - The bond Markets (individual and institutional investors) (Hoffmann 2008);
  - Investment funds;
  - Contractors in Construction phase;
  - Governments (Governmental Grants)
  - Insurance companies;
  - Sponsors which are providing funding equities;

- **Target Market for Project Monitoring service:**
  As we explained in the figure 5-1 of section 5, in project finance, Project Company in centre and as main player in the model allocate risks to different parties based on their capability. In this risk allocation mechanism risk control should be undertaken by those parties which their ignorance or neglect in taking this risks into account could impact the delay in the entire project. As explained as you can see in figure 5-1 of Sorge (2004), banks or syndicates of banks are responsible for guaranteeing on time delivery of their debt finance obligations and Sponsors also are responsible for
fulfilling their on-time delivering their equity promises. Any possible neglect of one of these entities to fulfil their financing obligations of fulfilling their contract undertaking could face the entire project in the construction and operation phases with inevitable delay which would not be compensated any more. On the other hand also these entities would like to make sure about sure that their investments would be allocated correctly and in the investment which is agreed upon in the contractual terms.

Therefore the interested entities for project monitoring services would be mainly Contractor/s who is contracted for construction phase as well as banks/ syndicates of banks and sponsors who could also hire a neutral third party inspection company to monitor the contactors activities in order to avoid any delay or deviation in the work.

**Summary of target market**
- Banks/ syndicates of banks and Institutional lenders funding non-recourse debts;
- Contractor/ contractors in Construction phase;
- Investment funds;
- Insurance Companies;
- Sponsors for funding equities;

**Service packages**

Our service packages within different phases the project finance life cycle which is depicted below in exhibit 2:

Exhibit 2: defined project finance life cycle

The investors, sponsors are facing various risks prior, during and after investments. The risks prior to investment would include for instance, if the project for which they are investing will be profitable enough to repay their investment, if the product of project will satisfy the off-takers and others customers expectation or it will fail, if the project will comply with international acceptable standards and norms. To assess this risk before entering into a financial undertaking or agreement, investors prefer to perform a feasibility study to unveil
this risk. If of course the risk could be avoided, they can enter into agreement otherwise it
denies the investment offer or modifies the parameters of the project.

Moreover during the implementation such as design, engineering and construction phases,
there are also risks which may threaten the existence of the project and accordingly the
project’s completion. In this phase, risks are mainly allocated to the contractor and therefore a
contractor could face penalties if the project would not end on schedule, on agreed quality
level or on the planned budget. Investors and sponsors are also concerned with on-time
completion of project. Therefore, both entities would be certainly interested, maybe for their
own interest, to hire a third party expert company to monitor the activities during design,
engineering and construction phase to alarm them of any risk, which might cause delay in the
completion of the project. The detail of our service packages is illustrated in table xx.
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<tr>
<th>Phase 1: Development</th>
<th>Phase 2: Design &amp; Engineering</th>
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<tr>
<td>• Technical feasibility &amp; due diligence;</td>
<td>• Project Monitoring;</td>
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<td>• Analysis of technical processes;</td>
<td>• Project progress review (measuring the progress of the project’s activities);</td>
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<td>• Site assessment;</td>
<td>• Periodic comparison of actual costs to estimated costs;</td>
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<td>• Review of design of the plant;</td>
<td>• Review of permits and licenses</td>
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<td>• Review of various permits;</td>
<td>• Project progress reports; (Review &amp; Issuance)</td>
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<td>• Technical contract evaluation</td>
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<td>• Specification verification</td>
<td>• Project management</td>
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<tr>
<td>• Supplier and subcontractor qualification review;</td>
<td>• Budget control</td>
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<tr>
<td>• Review of budget of construction;</td>
<td>• Accounts review</td>
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<tr>
<td>• Review of construction timetable;</td>
<td>• Tender support</td>
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<tr>
<td>• Review of plans and timetable of maintenance;</td>
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<tr>
<td>• Review of regulatory compliance;</td>
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| Environmental feasibility & due diligence: | |
|   • Environmental impact of the project | |
|   • Review of Permits & Regulatory compliance; | |
|   • The equator principles; | |

| Project management | |
|   • Identification/analysis of major risk factors (affecting project progress); | |
|   • Critical path analysis | |
|   • Tender support | |
**Project Monitoring:**
- Project progress review (measuring the progress of the project's activities);
- Project progress reports; (Review & Issuance)
- Construction supervision
- Periodic comparison of actual costs to estimated costs;

**Project Management:**
- Construction management
- Quality Management
- Budget control
- Accounts review

**Health, Safety and Environment (HSE) monitoring:**
- Post completion audit of the project or “Final Acceptance Audit”;

**Technical staffing**
**Environmental regulatory compliance;**
**Expediting;**
**Health, Safety and Environment (HSE) monitoring;**
**The equator principles monitoring;**

**Operational performance monitoring:**
- Output and supply supervision
- Regulatory compliance;

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**Table 1: defined scope of work for PF and PM services**

**Development statues of the product/service**
Our customer will range from governments and financial institutions such as banks to insurance companies and large scale industrial or service companies. Due to globalisation and the need for foreign investment, companies need to invest in other countries other than their own geographical borders. This could be done for several reasons such as, cost saving, lack of the right expertise in their own country, lack of enough space, or lack of government support and etc. This technological transitions as well as large scales transitions which are mainly done by local people needs supervision to ensure the budgeted financial projections are allocated correctly and spent in the planed source. This supervision process could be very costly for investing bodies due to many reasons.

Therefore here one of the needs which may arise for investing bodies would be the need to hire a third party, Expertise Company to take care of this task. This is done for different reasons One is as it was mentioned before, the third party company, such as SGS could use its vast network of expertise people in a timelier manner with lower cost to undertake investors responsibly in a more professional manner to achieve full customer value. The value for the
customer would be, less costly, more professional as an expertise party assesses the investment and supervise the implementation phase.

**Management team and Personnel:**

Of course our common goal and vision to be the benchmark in Project finance and project monitoring services within SGS. To reach this goal, we already have and if necessary will hire capable people/ expertise to support us in better implementation of these services. The aim is to define the project finance and project monitoring distinctly and clearly for SGS group and for the customers. However currently the following people are the team members:

1) **Daniele Raldi, Inspections Manager**
Daniele holds a M.Sc in Civil Engineering from ETH Zurich in Switzerland and several years of experience in sales and marketing. He has several experiences in sales and marketing with valuable experience in project management gained mainly very working for SGS.

2) **Behrouz Tizro, Project Manager (Project Finance/Project Monitoring /inspections)**
Behrouz holds a B.Sc in Industrial Management, a M.Sc (Eng) in Management of Production from Chalmers University of Technology, Gothenburg in Sweden and a MBA from Blekinge Institute of Technology Kalskrona in Sweden as well with good knowledge in project management field. B. Tizro has gained very good experience in sales particularly during his working period with SGS and is ready to apply them even in a bigger picture. His customer orientation and problem solving attitudes is one of his strong attributes. His reliability and trustworthiness is influential strength of him.

Additionally SGS Austria, with team of 4 experts in the field of sales and management of projects mainly in project monitoring will company us indirectly. All the above mentioned expertises and backgrounds will complement our knowledge and result would be very strong team in the field of project finance and monitoring. Team has worked very efficiently together in the past and we aim even for much more efficient working relation in future therefore any possible weakness will be complemented by each others strength. The team is determined for a common goal.
Market and competition:

Market size
Our market of course will not be limited to Swiss borders while our marketing activities will be solely done within Switzerland. This means that if potential customers wish to use SGS’s PF and PM services in any other countries out of Switzerland where their investment have been carried out, SGS Zurich will carry out the job in collaboration with local SGS office. Therefore our market is unlimited in terms of Geographical borders however we will, at least in the beginning, focus on Banks, insurance companies, engineering companies who might be the contractors.

Target market/market needs
SGS’s potential customers would be categorized in different levels, the first and the main would be the government/s who is often involved in investing in large-scale projects and investment. The second category would be banks and financial institutes which are granting loan to the investors or they might in fact be interested to invest directly, the others potential customers would range from contractors, sponsors of funding equities to insurance companies which are also involved in investment in even small and medium-sized and even large scale projects.
Our customers will be as below:

- Governments
- Contractor/contractors in Construction phase;
- Banks/ syndicates of banks for funding non-recourse debts;
- Insurance Companies;
- Sponsors for funding equities;

Market trends
The need for services of Third Party Service Company has increased due to the diversification of investments in different countries. These investments require feasibility study prior to undertaking the financial obligations and giving out loans to assess the possible risks involved with the investments. Even after investment and during the design and engineering and construction phases new risks might arise.

Project monitoring offered by SGS would unveil these risks in early stages in order to avoid any delay in project completion date. However there are signed that recent financial crisis and market uncertainty, has cause many investors delay their participation or suspend their investment to various reason. Therefore on one hand we may find the market a challenging market to penetrate but on the other hand there could be investing entities that can see this service as an opportunity in direction of minimizing risk and reducing cost. Here is, I would call the sweet spot of the market, where we can focus and make the investors aware of the advantages and long term benefits they may gain from PF and PM services.
Competitors’ analysis (Confidential)

<table>
<thead>
<tr>
<th>Competitors</th>
<th>Project Monitoring services (PM)</th>
<th>Project Finance Services (PF)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
<td></td>
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</tr>
</tbody>
</table>

Table 2: List of competitors

**SGS Competitive advantages**

SGS in general and Zurich special has several valuable competitive advantages:

- **Brand Name advantage**: SGS has always been benchmark in inspection, certification, and verification services in the world. This will help SGS to introduce the new services in easier matter and attract customer trust faster.

- **Large Network advantage**: It will be demanding for SGS competitors to compete with SGS in network capability issue. SGS will be able to offer a faster, more reliable and less costly service for its potentials customers due to its vast presence in more than 145 countries in the world.

- **Various expertise and backgrounds advantages**: SGS holds worldwide variety of experts with various engineering backgrounds.
Marketing and Sales Strategy

Our strategy is to be the most know and reliable company which is offering project finance and project monitoring services in one package in Switzerland within the framework of the defined scope of work outlined above focusing on the defined market using SGS Brand name, large network of expertise and pool of various engineers around the world. We will use /Ps marketing mix as our marketing strategy. Please see below for detail.

Our marketing strategy will be based on “7Ps”: product, price, place and promotion.

Positioning/Product
In outlining our positioning strategy we will refer to business strategies stated by Durbin mentioned in literature section. Below you will see some of these strategies and short explanation of each. SGS will need to adopt some of them to decide about it business strategy:

- **Differentiation:**
  By differentiation strategy, SGS Zurich will attempt to do all its best in order the customer perceive that the offered services would be unique and different than those of competitors. This can of course happen by using its vast network of expertises around the world and with its experience in inspections, testing, and certification services. And referring to the already conducted services within these two services. It can be benchmark also in project finance and project monitoring services as well.

- **Cost leadership:**
  SGS Zurich primary aim is customer satisfaction, this means that the quality of the work is not sacrificed for any price under any circumstances however due to its vast global presence both as operation units and network of laboratories SGS can certainly offer big quality service in a compatible price in comparison to the competitors and therefore better satisfying customers needs.

- **Focus:**
  Our primarily aim is to focus on the markets defined above and using already existing vast pools of expertises. Swiss market will be the first market which SGS Zurich will concentrate.

- **High quality:**
  One of the main advantages of SGS group is that it is benchmark in Inspection, Certification, verification and testing areas. It is trademark for high quality services. Having this in mind our customer will be served exceeding their expectation to better satisfy their needs.

- **Strategic alliances:**
  SGS Zurich will choose some strategic alliance within the group for various reasons such as sharing resources or dividing the market for better serving the target market or share the benefit as well exchange know how. It has already tied its relationship with SGS Austria’s project finance services departments which is one the most experienced within the group. We will continue to look for new strategic alliances.

- **Sticking to core competencies:**
  SGS Zurich will not enter into financial consulting aspects of project finance services.
It will only act within the framework of scope defined in table xxx. This will help SGS Zurich to focus better on those activities or services within which it has the necessary resources and it fits to its scope of activities and SGS group overall strategy.

All the mentioned elements will help SGS Zurich to establish long term relationships with its customers aiming to create advantage for its customers.

**Price (Confidential)**

Prices of these services will be set around the customer satisfaction taking into account the formula defined by SGS group as well. In price setting process, customer satisfaction would be very important element to take into account.

<table>
<thead>
<tr>
<th>Services</th>
<th>Price (CHF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Monitoring (PM)</td>
<td></td>
</tr>
<tr>
<td>Project Finance (PF)</td>
<td></td>
</tr>
</tbody>
</table>

Table 3: Prices for PF and PM services

**Place**

As mentioned before, SGS brand name is worldwide known and is a benchmark in inspection services; therefore we will not need to spend too much effort to introduce the market. The only thing we have to do is to inform potential customer about our new service. Hence our marketing strategy would be to conduct by the following channels.

- **Sales team**: we will also be in touch with the customer by means of e-mail, telephone and try to make them aware of our new products.
- **Direct E-mail/mail**: special group of potential customers will be selected and contacted via post or e-mail. We have already purchased some of the addresses and the name of companies. We may need more comprehensive one in later point. This will be purchased as well.
- **Call centre**: Call centre agencies will be hired to contact the list of customers to inform them about our new product and refer them to our office for more complete and technical questions.
- **Website**: our website will be updated accordingly as well to give necessary instruction and information to the potential customers.

**Promotion:**

Promotion will be done mainly through the following channels:

- **Direct marketing**: in the beginning some key potential customers will be selected to be contacted via e-mail, telephone.
- **Public relations**: we may publish some articles in some best-seller business or management magazine to introduce our products.
- **Customer visits**: direct customer visit and giving presentation would be another important promotional channel for us.
- **Governmental sources**: some governmental sources such as SECO, OSEC and etc.
• **Chamber of commerce**: some presentation might be arranged in chamber of commerce to introduce the services.

**Customer Service & Customer Value**

As our products are service products, therefore we have to spend even double energy and effort to make sure that we will reach even higher level of customer satisfaction and consumer loyalty. Our customers are in the centre of our strategy making process and therefore we will remain at their disposal and will welcome for any sort of advice, improvement recommendation. We will be always reachable by our customer-oriented team.

In addition to the above tools and strategies, one of our most strategic and important marketing tools would be to listen to our customers effectively in order to find out their real needs and service them accordingly (Bohn 1999). As Bohn (1999) claims, this increases trust and credibility and will help enhance the long-term relationship with the customers.

However having said that we will not adhere to one or only one combined set of strategies as mentioned above but rather, as we are professional service company, we will apply and practice different types of marketing strategies which be significantly depend on customers wishes and expectation. We will react to changes and changing needs of customer flexibly. This will not come true only by building long term relationship with our customers (Reid 2008).

Backed by a worldwide pool of inspectors and specialists in more than 1,000 offices, SGS performs comprehensive, effective Project Monitoring Services. SGS as an international Project Monitoring partner offers on-site visits with local personnel, provides an exact status report about the respective situation and the applied quality within shortest time.

SGS comprehend customer real needs and always speaks the client’s language. During a Project Monitoring Service, Communication will be handled through the local SGS office in the country where the project in running. While going abroad is always risky, the risk can be minimized by permanently monitoring the project through an independent consultant. Possible problems will be detected and reported at an early stage in order to assure quality and just-in-time deliveries.
**Business system:**

Our business system model which maps out the various activities required for our service product is as below.

You see 3 Administration, operation, sales and Marketing. In fact, at least in the beginning of rendering this service, all will be handled by two to three people within our team together with SGS affiliates those that are necessary to be involved in the operation. Our business system is exhibited in Figure 2.

![Business System Diagram](image)

Exhibit 2: Our business system

**Organization**

**Organizational chart**

In fact our Project finance and project Monitoring will be placed under Industrial business line which will be headed by B.Tizro and will have 3 sub-division called administration, operation and Marketing and sales. Of course, in the beginning, our organization chart will be simple however we will adapt it to new circumstances as we develop and grow. We will remain flexible and open minded to the changes. Of course some of our already hired staff mainly in administration and back office may be used for this business service as well. (See Exhibit 3).

![Organization Chart](image)

Exhibit 3: PF department organizational chart
Business location
The development, sales and marketing location would remain as SGS Zurich office however depending on the nature of project and the country where the project is going to be executed, the operational team/resources will be added to the team from different SGS affiliates. Describe briefly the choice of location for your business. In case the business growth, we might need to add space to our current place.

Personnel planning (Confidential)
Our personnel forecast for the first five years of operation are set out in the following table. Most staff will be employed in sales, marketing and customer services. The number of staff will be increased proportional to the number of new customers and of course projects (See Table 4).

<table>
<thead>
<tr>
<th>Personnel by function</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales &amp; Marketing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Administration</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Personnel</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4: forecasted resources in 5 years time

Partnerships / Strategic alliances (Confidential)

Implementation schedule
Growth strategy (Confidential)
Development plan (Confidential)

SWOT analysis (Confidential)

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 5: SWOT analysis

Financial Plan & sales forecast

Financial plan (Confidential)
## Sales forecast (Confidential)

<table>
<thead>
<tr>
<th>Sales forecast (CHF)</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Forecast for 5 Years</td>
<td>Year 1</td>
<td>Year 2</td>
<td>Year 3</td>
<td>Year 4</td>
<td>Year 5</td>
</tr>
<tr>
<td>PF</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total sales</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Table 5: Sales forecast

## Projected sales growth (Confidential)

<table>
<thead>
<tr>
<th>Projected Sales growth</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PF</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Table 6: Projected sales growth

## Summary of financials (Confidential)

<table>
<thead>
<tr>
<th>Sales forecast</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Forecast for 5 Years</td>
<td>Year 1</td>
<td>Year 2</td>
<td>Year 3</td>
<td>Year 4</td>
<td>Year 5</td>
</tr>
<tr>
<td>Sales</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 7: Sales forecast

## Cash flow (Confidential)

<table>
<thead>
<tr>
<th>Cash Flow statement (CHF)</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Projected sales growth</td>
<td>Year 1</td>
<td>Year 2</td>
<td>Year 3</td>
<td>Year 4</td>
<td>Year 5</td>
</tr>
<tr>
<td>PM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PF</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Table 8: Cash flow
### Income statement (Confidential)

<table>
<thead>
<tr>
<th>Income Statement (CHF)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales revenue</td>
<td>0</td>
</tr>
<tr>
<td>Cost of service sold</td>
<td>0</td>
</tr>
<tr>
<td><strong>Gross profit</strong></td>
<td>0</td>
</tr>
<tr>
<td>Operational cost</td>
<td>0</td>
</tr>
<tr>
<td><strong>Profit for the year</strong></td>
<td>0</td>
</tr>
</tbody>
</table>

Table 9: Income statement
Annex 2: Interview questions

1. I disagree with already available phases of project finance lifecycle and I have come up with a new one as below (this was done based on the research):

For my understanding and referring to various articles, “appraisal /approval” is not a phase in itself within project lifecycle but it is located between the two phases of “Development” (Phase 1) and “Design Engineering and Construction” (Phase 2). This means that Approval/appraisal is required after the development phase in order to enter Design Engineering and construction phase; however, it is not an independent phase by itself.

1. Do you agree with me on this? If not please tell me why.
   (The explanation of each phase will be provided upon request)

2. Do you agree with my defined scope in the table below? In which area SGS might not be active or not have resources and expertise?
<table>
<thead>
<tr>
<th>Phase 1 Development Phase:</th>
<th>Phase 2 Design Engineering and Construction Phase:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Legal due diligence:</strong></td>
<td><strong>Project Monitoring:</strong></td>
</tr>
<tr>
<td><strong>Technical due diligence;</strong></td>
<td><em>Project progress review</em> (measuring the progress of the project’s activities);</td>
</tr>
<tr>
<td><strong>Environmental due diligence;</strong></td>
<td><em>Identification/analysis of major risk factors (affecting project progress);</em></td>
</tr>
<tr>
<td><strong>Financial due diligence;</strong></td>
<td><em>Critical path analysis;</em></td>
</tr>
<tr>
<td><strong>Technical feasibility:</strong></td>
<td><em>Periodic comparison of actual costs to estimated costs;</em></td>
</tr>
<tr>
<td>o Analysis of technical processes;</td>
<td><em>Periodic comparison of actual results to planned results;</em></td>
</tr>
<tr>
<td>o Design of the plant;</td>
<td><em>Periodic comparison of project progress to schedule;</em></td>
</tr>
<tr>
<td>o Various permits;</td>
<td><em>Periodic computation of the percentage completed;</em></td>
</tr>
<tr>
<td>o Budget of construction;</td>
<td><em>Post completion audit of the project;</em></td>
</tr>
<tr>
<td>o Construction timetable;</td>
<td><em>Project progress reports;</em></td>
</tr>
<tr>
<td>o Operation and maintenance costs;</td>
<td><em>Assessing the prospects of the project’s achieving its immediate objective;</em></td>
</tr>
<tr>
<td>o Plans and timetable of maintenance;</td>
<td><em>Identifying the actions necessary, and the deadline under which they should be carried out for improving or correcting implementation problems;</em></td>
</tr>
<tr>
<td>o Revenue projections;</td>
<td><strong>Project Management</strong></td>
</tr>
<tr>
<td>o Regulatory compliance;</td>
<td><em>Construction supervision (expert on site)</em></td>
</tr>
<tr>
<td><strong>Economic feasibility:</strong></td>
<td><em>Budget control</em></td>
</tr>
<tr>
<td>• Construction budget;</td>
<td><em>Accounts review</em></td>
</tr>
<tr>
<td>• Operating Budget;</td>
<td><em>Procurement support</em></td>
</tr>
<tr>
<td>• Debt service;</td>
<td><em>Project management systems</em></td>
</tr>
<tr>
<td>• Working capital;</td>
<td><strong>Project Certification</strong></td>
</tr>
<tr>
<td>• Valuation;</td>
<td><em>Manufacturing survey;</em></td>
</tr>
<tr>
<td>• Assumptions;</td>
<td><em>Installation survey;</em></td>
</tr>
<tr>
<td>• Ratios;</td>
<td><em>Expediting;</em></td>
</tr>
<tr>
<td>• Environmental feasibility:</td>
<td><em>Technical compliance;</em></td>
</tr>
<tr>
<td>• Environmental impact of the project:</td>
<td><em>Economic compliance;</em></td>
</tr>
<tr>
<td><em>Site, Air, Water, Plant and animal habitants, Health hazards, Noise, Aesthetics, Histories and cultural significance, Transportation, public services and utilities, indigenous people</em></td>
<td><em>Environmental regulatory compliance;</em></td>
</tr>
<tr>
<td>• Permits;</td>
<td><em>Health, Safety and Environment (HSE) monitoring;</em></td>
</tr>
<tr>
<td>• Public oppositions;</td>
<td><em>Environmental damage;</em></td>
</tr>
<tr>
<td>• World bank environmental standards;</td>
<td></td>
</tr>
</tbody>
</table>
### Phase 3 Start-up Phase:
- Technical compliance;
- Economic compliance (cost review)
- Environmental regulatory compliance;
- Health, Safety and Environment (HSE) monitoring;
- Environmental damage;
- The equator principles monitoring;
- Witnessing and monitoring of performance test

### Phase 4 Operation & Maintenance Phase:
- Operational performance monitoring:
  - Raw material/fuel supply supervision
  - Output demand fluctuation supervision,
  - Technical problems, and inflation,
  - Regulatory compliance;
- Technical compliance;
- Economic compliance;
- Environmental regulatory compliance;
- Health, Safety and Environment (HSE) monitoring;
- Environmental damage;
- The equator principles;

3. Do you accept the scope defined for Project Monitoring? What would you add or delete?

4. In my understanding, project monitoring is always done in the 2\(^{nd}\) phase of a project’s finance lifecycle, i.e. “Design engineering and Construction”. Do you agree? If not please tell me why.

5. My analysis of the case studies/assignments provided by SGS found out that almost 80% of assignments where related to project monitoring rather than project finance. Do you agree? If not, please tell me why?

6. How did you define your market for project monitoring? What was your marketing strategy for this service?

7. How did you define your market for project finance? What was your marketing strategy for this service? Can you elaborate?

8. Were you ever involved in the 3\(^{rd}\) (start-up) and 4\(^{th}\) (Operation and Maintenance) phases of project life cycle? If yes, what was the scope of work done there?

9. Has anyone ever offered legal or financial due diligence? If yes, what was the scope of work done there?

10. It would be very helpful if we hear your marketing experiences. This which would also help us define our marketing strategy. Just few sentences!