The Pharmaceutical and Healthcare sector is one of the world’s fastest growing industries running into several trillion dollars and touching around 4.6 billion human beings across the globe. On an average, it consists of over 10% of the Gross Domestic Product (GDP) of the most developed nations forming an enormous part of its economy. With the global population reaching the 7 billion mark, the global pharmaceutical industry is set for rapid growth. This growth will be fuelled by the following factors:

- Ever increasing demand for the pharmaceutical products and healthcare services because of the indispensible nature of the deliverables.
- Nearly zero threat of substitution of the product and services provided.
- Constant innovation being the driving force preventing any sluggish behavior.

Figure 1 gives a brief overview of the top 10 global market players, based on the expected revenues by the end of financial year 2011.
Pharmaceutical and Healthcare Sector-Critical Concerns

Inseparable like two sides of a coin, the pharmaceutical industry too, like any other industry, has its fair share of pros and cons. The industry, though rapidly growing has a few critical concerns. Some of them are inherent in the firms operating procedures while some others are inherent in the nature of the business and cannot be avoided. A few others are because of the external environment in which the company operates.

Figure 2

Alpha Concerns:
These are firm specific primary concerns which are due to the operating strategy that a firm follows. These are further divided into:-

Endogeneous Concerns: These are critical concerns with the internal operations of the firm. The pharmaceutical industry majorly faces the following endogeneous alpha concerns:-

- Low productivity of Research and Development pipeline: Over the past decade the number of applications for approval of new medical entities being made to FDA has averaged 30 per year. However, in 2010 only 23 applications were filed, the second lowest number in a decade.
Figure 4

- **Rising Research and Development Cost versus diminishing return**: The main concern is not just the low productivity but the resultant increase in cost vis-à-vis the diminishing returns. The costs for R&D have consistently increased whereas the returns have been diminishing over a period of time.

**Exogeneous Concerns**: These are concerns arising out of the firms external business model and the interaction with the firm related external procedures. These include:

- **Supply Chain concerns**: Supply chain has been a major concern with the healthcare industry as also with the pharmaceutical sector. Large lead times for healthcare equipment and for certain raw materials have been a cause of concern for many global and domestic companies. Considering the fact that raw materials constitute of over 45% of the revenues for the pharmaceutical industry show the importance of having a well-developed supply chain.

- **Beta Concerns**: These concerns arise due to the dynamic nature of the external environment and due to the interferenc and influence of the uncontrolled external sources.

**Patent Cliff**: Patent cliff describes what happens to the sales of an original drug when its protection (patent, regulatory, etc.) ceases: A dramatic drop in sales both due to declining unit numbers, but also a price erosion of up to 70 percent within months. Patent cliff will fundamentally impact individual pharmaceutical companies in the mid-term future. During the next five year period i.e. from 2011 to 2016, the revenues of drugs having patents that will expire are about $89.5 billion USD, the majority of them small molecules.
Pharmaceutical and Healthcare Sector-Proposed Innovations

Innovative Business Models: The case suggests a few innovative business models to ensure a nice balance between profitability and social responsibility. The former aspect will attract various companies to this model whereas the latter one will pull in government authorities to consider and allow the implementation of these models.

Change in outsourcing models: Where large, business critical projects are out-sourced, for example clinical trial, there is scope for increased project risk due to the arms-length relationship between the parties. The ideal solution would be to embed an employee in the contractor’s operations to provide maximum visibility on project progress and emerging issues. Unfortunately this is rarely an option given cross-client confidentiality concerns. This means that many customers manage their relationships with service providers at arm’s-length, risking delays in recognising emerging project roadblocks. We propose a third way. Engaging with an experienced consultant to act as project manager presents a neutral interface for the contractor. This has benefits for companies carrying out virtual drug development including reduced costs and uncertainty due to virtual development, greater transparency into project progress, with a fire-wall to reduce confidentiality conflicts. Understanding the nature and the scale at which outsourcing is prevalent in pharmaceutical sector, this can be an effective way to reduce costs and mitigate risks.

Figure 5

Figure 6
Proposed Innovation In The Global Pharmaceutical Business Model

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Open Innovation—Looking beyond the internal R&D

Internal R&D remains by far the leading source of ideas for innovation for the sector as a whole (cited by 60%), and for pharmaceutical (73%) and biotech (71%) in particular. This is not inherently bad. A strong internal R&D function has been central to the success of many leading companies. However, in such a competitive environment, it's time firms understand the need for effective partnerships as well. Although companies in the sector have engaged in partnerships for a long time, there is a shift in recognising how we need to partner. In particular, leading innovators are much more likely to have embraced open innovation. Open innovation involves two elements: first, searching for new ideas wherever they can be found, even licensing in useful ones where necessary; second, willingness to share or license out IP that a company is not using.

Strategic Innovation:

Business Strategies are dynamic and change over a period of time. The strategies that have worked for the companies in the past couple of decades need not necessarily work in the next decade. A strategic shift in the battle for competitive advantage can help a company to not only survive but also succeed in a competitive market. The following table shows the shift in strategies that could help a company navigate competition and emerge successfully and profitably.

<table>
<thead>
<tr>
<th>Basis of Competitive Advantage today</th>
<th>Basis of Competitive Advantage in 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development Resources &amp; Marketing Scale</td>
<td>Value of Products, Services and Distribution Strength</td>
</tr>
<tr>
<td>Global High Prices Restricting Access</td>
<td>Price based on ability to pay driving volume uplift</td>
</tr>
<tr>
<td>Multiple competitors in major therapeutic areas</td>
<td>Fewer Competitors in broader range of diseases</td>
</tr>
<tr>
<td>Billions of money in Drug Revenue covering fixed costs</td>
<td>More products with lower revenue and costs</td>
</tr>
<tr>
<td>Acquisition of technology and products.</td>
<td>Collaboration with competitors, academia and biotech</td>
</tr>
</tbody>
</table>

Online Chemists and Healthcare bookings:-

Usage of the information system for online drug procurement will not only increase the scope of wider sales but will also reduce cost over a period of time. The commissions charged by local chemist shops should be passed onto the customers will reduce their cost. It would be like having a chemist chest, similar to currency chest, at different junctures to supply the ordered medicine. Also, the penetration that such online sales will have in the urban market, because of the widespread use of technology, can be enormous. This will also legalize all the transaction, thereby reducing any illegal activity and increasing government revenue.

For the healthcare sector, online bookings for healthcare checks and various tests as well as online checking of the reports thereby will not only help in maintaining a permanent and easily accessible patient database, but will also save the time. Such online system can then be connected to a Master system which can be accessed by all the hospitals across the country and even worldwide. Thus, a patient record and a history of all the ailments faced shall flash in as soon as the hospital enters the patient ID. This will work, similar to the UID scheme, whereby one single database can access to all the past and present information speeding the entire process.

Synergies:

Synergies within the industry has always come through either mergers or acquisitions. Strategic alliances with different firms within the industry will boost a new operational method and will ensure that firms deal with competition at a macro level vis-à-vis the micro level, as generally done today.

Strategic Alliances versus M&A: Strategic Alliances reduce risks as compared to mergers and acquisition. This is especially important and beneficial when dealing with foreign firms. For an Indian company to merge or acquire a company in say Africa, to enter the African market is much riskier than just having a strategic alliance with the same. The local company shall contribute with its expertise during this alliance and the reduced investment as well as a comparatively certain outcome will benefit the Indian company.