



# TELECOMMUNICATIONS

## Rating Methodology

### Introduction

Modern telecommunication systems are rapidly becoming one of the basic needs of economic development. Once seen as a luxury, telecommunication is an integral part of the new way of doing business in the era of globalization with efficient (i.e. speed and quality) voice and data communication being of critical importance to even small businesses.

Telecommunication, like other utilities, was once viewed as a critical service that the government was responsible for providing. As a result most countries at some stage had government-owned telecommunication monopolies. However, the significant technological changes in the field of telecommunication during the past three decades meant that these organizations were generally able to provide only the most basic of telecommunications services, and in many cases that to by utilizing obsolete technology. Therefore, in the absence of entrepreneurial managements and lack of customer orientation, along with a lack of adequate financial resources, these organizations could no longer effectively cater to the requirements of the public

they were set-up to serve. As a result, there was a general consensus on the need to allow the private sector to enter into the arena. This was generally achieved by first permitting private sector companies to enter into non-traditional areas such as internet services and cellular telephony and then gradually relaxing the hold of the monopoly over its traditional services (i.e. voice telephony). Such deregulation was commonly characterized by the setting up of an autonomous regulator, in order to provide a level playing field to the new entrants and preclude the incumbent monopoly from using its market position to its advantage.

### The Pakistan Context

In Pakistan, telecommunication is today one of the fastest developing sectors of the economy, attracting significant foreign as well as local investment, generating employment and raising the expectations of the consumers with respect to improved service quality at lower cost.

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Telecommunication deregulation in Pakistan had originally commenced in the early 90s with the introduction of cellular telephony in the country. This area was from the onset in the private sector, although the incumbent monopoly did set-up its own subsidiary that acquired the fourth nationwide cellular license to be issued. Similarly, internet and non-voice based data transfer services were also private sector domains from the beginning.

Effective January 1, 2003, the monopoly of the incumbent telecommunication operator, Pakistan Telecommunication Company Limited (PTCL), over non-cellular voice telephony was abolished opening the way for new entrants. However, it took some time before the policies and guidelines for entry into the various segments were finalized by the autonomous telecommunication regulator, Pakistan Telecommunication Authority (PTA).

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loop, wireless local loop etc. The driving force behind this impetus was probably the success of the cellular phone companies that, despite comparatively higher costs, were able to help Pakistan boost overall teledensity to 8.47% (share of cellular services was 5.28%) by the end of

2004 whereas in June 1997 this had been at a poor 1.91% (with the share of cellular services only 0.11%). Although, the growth in the fixed line segment has been impressive in the given period, with the actual number of lines over doubling from approximately 2.3m to approximately 4.8m, the cellular subscriber base has increased during the same time from a negligible base of approximately 0.15m subscribers to approximately 8m subscribers. The continuing pace of growth can be judged by the fact that cellular teledensity registered a further growth of 0.31% (nearly 0.5m new subscribers) in January 2005 also. This phenomenon is the result of the ease of creating infrastructure for wireless services (including cellular and wireless local loop) as compared to the traditional fixed line infrastructure. The expected start of service by new entrants in cellular service as well as the commencement of wireless local loop services will continue to provide improving coverage to the underserved markets as well as to areas where the fixed line infrastructure has failed to grow in line with customer needs.

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Pakistan is also witnessing the trend seen in most countries in the post deregulation scenario, with a large number of new entrants expected to enter the fray. However, international experience has also shown that even in a rapidly growing market the success of individual enterprises is not a given and generally the industry tends to enter into a consolidation

phase characterized by the exit of the weaker players as well as substantial merger and acquisition activity once the initial euphoria of a new business opportunity dies down.

#### *Rating Methodology*

The basic purpose of JCR-VIS' analysis remains the same i.e. to determine the credit risk of the company arising from the dynamics of the industry in the context of the Pakistan environment. In newly emerging areas like telecommunication, JCR-VIS formulates its analytical strategy through developing an understanding of the underlying risks peculiar to that sector, arising from both macro factors as well as the risks faced by individual companies. This understanding is developed through extensive research on national developments in the relevant sector and the comparison of

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these with the international experience, followed by

discussions with sector experts to understand any unique risks that may arise in the local environment. This paper sets out the areas that JCR-VIS believes most impact the risk profile of telecommunication companies in Pakistan.

#### *Regulatory Environment*

The performance of the regulator remains one of the key elements when assessing the risks associated with telecommunication companies, particularly in markets like Pakistan that are dominated by the presence of large, formerly monopolistic incumbents. As the

competitive pressure starts to develop, international experience has shown that the incumbent in the bid to avert this threat adopts an uncooperative attitude towards the new entrants.

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In telecommunication this becomes very necessary as the very start of operations by a new entrant is dependent upon provision of certain essentials by the incumbent, like interconnects and release of allotted numbers. Incumbents also have the incentive to use their financial muscles to start a price war. In Pakistan, to date, the regulator has cut the incumbent's pricing power by making tariff changes subject to regulator approval. Further, the regulator is also responsible for supervising the compliance by the incumbent in those areas where its cooperation with the new entrants is required under the deregulation policy.

However, the biggest regulatory risk, like in any policy driven sector, is of a change in the given policy. Such a change can significantly impact all players in the industry, as companies rightly align their strategic plans with the existing policy, but the impact is much more pronounced for companies that have yet to reach maturity. This risk recedes over time with the policy makers developing a better understanding of the intricacies of the sector as well as identifying areas where the policy needs to be adjusted to better suit the overall requirements of the country.

*Demand Risk*

Demand risk of the enterprise has three different elements: overall demand for telecommunication facilities, demand for facilities in the targeted segment and customer choice within the segment.

As discussed earlier, teledensity in Pakistan has grown substantially over the past few years. However, it still lags behind by international standards even in comparison to several other developing countries. Also, internationally there is no evidence that growth from the

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current level achieved by Pakistan has been constrained by lack of consumer demand. Rather absence of infrastructure and service

providers has been the main inhibiting factor in teledensity growth in developing and underdeveloped countries. Therefore, it is probably safe to assume that overall telecommunication demand will not become a factor over the medium to long-term. However, this assumption may need to be revisited sooner in case the new entrants in the sector as well as the existing players substantially speed up the rate of infrastructure roll out.

There is a higher probability of demand dynamics becoming a factor when the consumer is deciding which type of basic telecommunication service to avail. Fixed line, wireless local loop and cellular segments will all have their target customer profiles but there may be appreciable overlap in these, making the customer

preference a key element. Also, some of these markets will have different levels of saturation as compared to others implying that opportunities in some sectors are greater than others.

Within its particular basic segment also, each enterprise will have to develop a unique selling proposition in order to attract the customer. This may be achieved through pricing differentials or service quality or packaging of products. The level of integration of services will also be an important consideration as well-integrated service providers would be able to leverage demand for one service to increase revenues in other segments.

In Pakistan, the licensing regime is such that apart from the cellular licenses (which are given on a nation-wide basis), the other licenses are on a region-wise basis. Therefore, individual service providers demand will also depend upon the regions for which they have received licenses. For example, a company having licenses for one or more underserved regions may have little difficulty marketing the product, but strong revenue generation would be dependent on very high volumes rather

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than revenue per user. On the other hand, licensees in more competitive regions would have to aggressively market their products to make inroads but revenue per user would be much higher in these regions.

Advertising will also play a key role

in creating demand for the service of an individual enterprise in the emerging highly competitive scenario in the telecommunication sector. Customers seeking to differentiate between multiple relatively similar services may be highly influenced by high visibility advertising while making their final decisions. Therefore companies, especially those targeting the low value-added markets, would have to probably incur heavy advertising expenses in order to capture market share. JCR-VIS will therefore relate the size of the advertising budget of each enterprise in relation to its size in order to determine adequacy.

#### *Technological Risk*

One of the major decisions for an enterprise in the telecommunication sector is the choice of the technology to be used as that determines the type of infrastructure and hence the level of capital

JCR-VIS remains technology neutral in its assessment of risk, provided that the technology has been internationally proven as viable

expenditure to be incurred. Although, the merits and demerits of

various technologies remains a hot topic of debate within the telecommunication industry itself, JCR-VIS remains technology neutral in its assessment of risk, provided that the technology has been internationally proven as viable (e.g. in wireless telephony the use of GSM or CDMA technology would not make a difference to the enterprise's risk profile). JCR-VIS is more interested in the mesh between the chosen technology and the company's business strategy. As important as the

choice of technology is the choice of the technology provider. JCR-VIS examines the past experience of the chosen technology provider in similar markets and their reputation with regards to quality and timeliness of execution.

Technology based companies require continuous capital expenditure to keep the infrastructure updated. Even then development of new technologies that may render the existing infrastructure obsolete cannot be ruled out.

However, technological obsolescence is not an immediate threat if the existing infrastructure is based on current front-line technology, as the lead time

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required for development and roll out of the new technology is significant. In fact, once the telecommunication infrastructure of a country reaches a certain level, changes due to minor technological advances are avoided due to the extremely high costs involved in any such exercise.

Back-end management information systems to cover areas like distribution, billing, customer complaints, financials etc. will also have to be very robust in order to ensure smooth operations.

#### *Human Resources*

As in all other sectors, the management of the company is assigned a significant weightage while assessing the risk profile of the enterprise. The senior management of the newly formed telecommunication companies will have to be aware of the international experience in various seg-

ments in the post deregulation period in order to be able to learn from the mistakes of others. Also, management will have to be very dynamic in order to constantly adapt its strategy to a market that will be evolving rapidly over the medium-term. The availability of adequate human resource with the experience of working in senior capacities in a deregulated telecommunication sector may be an issue on an industry-wide basis. Therefore, it may be expected that enterprises looking for the relevant experience may look to bring in suitable expatriate staff.

The other critical area with respect to human resources is the technical staff. Probably the most significant and immediate risk for local telecommunication

availability of experienced telecommunication professionals with an understanding of the new technologies is expected to be less than that of the demand

enterprises exist when the foreign technology provider completes the infrastructure set-up and operations commence. The enter-

prise needs to hire and train local professionals in the running of these systems. Since the entire business model will be based on the smooth running of the technical side, no enterprise can afford to take risks in this area. Again, availability of experienced telecommunication professionals with an understanding of the new technologies is expected to be less than that of the demand as several new entrants look to enter the arena in a short space of time. However, enterprises may look to supplement their in-house arrangements with service agreements with the technology providers in order to provide themselves a cushion against any

major technological disruptions.

In both the critical human resource related areas identified above, the enterprise will have to have the financial muscle to fix remuneration and benefits at levels to attract and retain high quality personnel.

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#### *Service Quality*

The basic area where each telecommunication provider will have to establish itself is the quality of service. This will be the key to customer base retention and steady growth after the initial expected surge. This is even more valid in the early stages of the industry lifecycle, since the high level of expected competition in all segments implies that there will be little or no room for price differentiation. In fact in such an environment, any premium will be solely associated to quality of service.

Apart from the technical aspect and its impact on service quality as identified earlier, the enterprise needs to concentrate on several other facets. One of the major challenges would be that growth in customer base is matched by growth in infrastructure. This task involves very astute planning as deployment of too large an infrastructure without the associated customer base can result in problems in covering the infrastructure cost, including resulting debt obligations. On the other hand, to slow a deployment of new infrastructure would result in an over-

load of the existing systems leading to customer dissatisfaction.

Procedures for acquiring services should not be too cumbersome and time consuming. Also outlets should be created at a number of locations to create easy access. Enterprises planning to work on the prepaid system will have the difficult task of managing a large, widespread distribution network ensuring recoveries as well as proper stocking with the distributors. Those working on the post paid model would have to create proper billing and recovery systems. Another important area would be the setting up of customer complaint management systems that ensure adequate redressal of customer complaints and identify those that indicate systemic problems for management's attention.

#### *Capital Structure*

Generally, technology based capital intensive companies require higher proportions of equity in their capital structure as compared to their relatively low-tech counterparts due to the higher associated risk arising from significantly volatile business dynamics. This is particularly true for enterprises with significant green field characteristics. The relatively lower debt level provides cushion against problems faced in the start-up stages as well as mitigating risks arising from the external environment. However, it may be noted here that this discussion is in terms of proportions only. As a consequence of the capital intensive nature of the telecommunication sector, most enterprises will be carrying more long-term debt

on their balance sheets than their low-tech counterparts, even if debt constitutes a lower proportion of the overall capital structure.

Continuous technological changes as well as the need to provide new innovative products implies that most telecommunication companies are constantly in the process of executing new capital intensive projects and therefore the debt:equity mix requirements will continue to remain unchanged even as the enterprise matures. However, if the enterprise chooses not to constantly upgrade itself it would face the risk of stagnation and obsolescence, creating pressure on its revenues

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**Faheem Ahmad**

President & CEO, JCR-VIS  
Founder, VIS Group

Faheem Ahmad has diverse experience with international consulting agencies in USA & Middle East. He has also held senior positions with local industrial and financial groups. In 1994, he established Vital Information Services (Pvt.) Limited, which is a leading capital market research house. VIS has the largest data bank of corporate Pakistan. His major research work includes copyrighted F&J financial strength rankings, Musharaka Variable Income Securities and stock market indices. VIS group includes JCR-VIS Credit Rating Company Limited and News-VIS Credit Information Services (Pvt.) Limited, the first private credit bureau of Pakistan. The majority of shareholders in group companies include the largest publication house in Pakistan and major financial institutions.

He obtained his B.S in Civil Engineering from NED University of Engineering and Technology, Karachi. He also has Masters degrees in Engineering and Business Administration from USA. His research work has been published in various international journals.

**Saad Ahmed Madani**

Group Head - Corporates & Structured Finance

Saad Ahmed Madani, a chartered accountant by profession, heads the Corporates & Structured Finance Group at JCR-VIS. In addition he also supervises corporate governance ratings. He has been associated with JCR-VIS for nearly five years, prior to which he had completed his training from a leading audit firm in Karachi.

Jahangir Kothari Parade (Lady Lloyd Pier)

Inspired by Her Excellency, The Honorable Lady Lloyd, this promenade pier and pavillion was constructed at a cost of 3 Lakhs and donated to the public of Karachi by Jahangir Kothari to whose generosity and public spirit the gift is due. Foundation stone laid on January 5, 1920. Opened by Her Excellency, The Honorable Lady Lloyd on March 21, 1921.

*Dome: A roof or vault, usually hemispherical in form.*

*Until the 19th century, domes were constructed of masonry, of wood, or of combinations of the two, frequently reinforced with iron chains around the base to counteract the outward thrust of the structure.*

*Origins: The dome seems to have developed as roofing for circular mud-brick huts in ancient Mesopotamia about 6000 years ago. In the 14th century B.C. the Mycenaean Greeks built tombs roofed with steep corbeled domes in the shape of pointed beehives (tholos tombs). Otherwise, the dome was not important in ancient Greek architecture. The Romans developed the masonry dome in its purest form, culminating in a temple built by the emperor Hadrian. Set on a massive circular drum the coffered dome forms a perfect hemisphere on the interior, with a large oculus (eye) in its center to admit light.*



Jahangir Kothari  
Parade

## National Excellence, International Reach

JCR-VIS Credit Rating Company Limited is committed to the protection of investors and offers a blend of local expertise and international experi-

ence to serve the domestic financial markets. With its international reach, JCR-VIS is positioned to aim for an international mark. In this regard, the global experience of our principal, Japan Credit Rating Agency, Ltd. has been invaluable towards adding depth to our ongoing research endeavors, enriching us in ways, that enable us to deliver our responsibilities to the satisfaction of all investors.

The edifice of the Jahangir Kothari Parade has stood proudly through the years and is a symbol of our heritage. Its 'Dome' as the most stable of building structures, exemplifies architectural perfection. Committed to excellence, JCR-VIS continues its endeavor to remain an emblem of trust.

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