Executive Summary

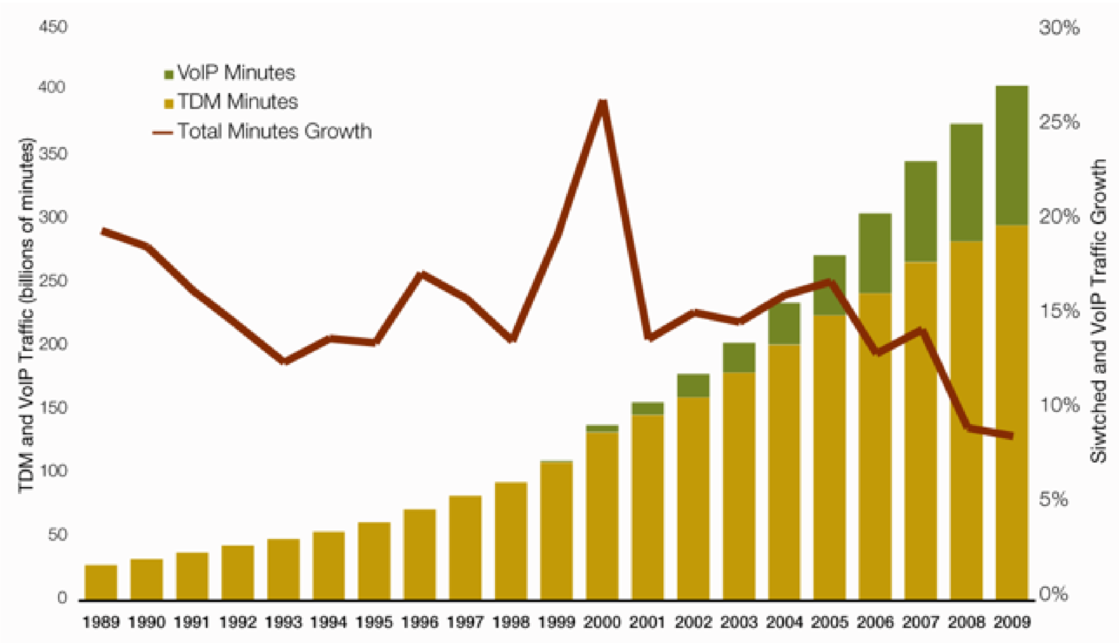
Few industries have experienced more wrenching changes than the international long-distance telecommunications market. Over the past 20 years, service providers have weathered market liberalization, the fallout of the telecom industry market bubble, brutal price competition, and rapid technological innovation. The coming years hold their own challenges, as carriers now must determine when to abandon legacy infrastructure in favor of IP networks, come to grips with consumer Voice-over-IP services, and contend with flat-rate (and sometimes free) international calling plans. Carriers' adaptation to the changing market environment is complicated by the deep recession that has gripped the global economy. These market conditions have a clear impact on the international voice market. The *TeleGeography Report* analyzes and quantifies the state of the international long-distance industry and assesses the factors that are likely to shape it in the years ahead.

Traffic Trends

Over the past 20 years, international voice traffic has grown at a cumulative rate of just over 14 percent annually (see Figure: International Call Volumes and Growth Rates, 1989-2009). Growth was especially rapid during the late 1990s due to a confluence of factors. A wave of market liberalization, which peaked in 1998, brought new entrants to the market, resulting in sharp declines in international calling rates. Mobile phones emerged as a mass-market product and gained hundreds of millions of new subscribers, creating new opportunities for consumers and business people to make calls. Calling cards and pre-paid services made international communications affordable to low-income immigrants, spurring call growth to developing countries, in particular.

FIGURE 1

International Call Volumes and Growth Rates, 1989-2009



Notes: Data for 2009 are projections based on half-year results. VoIP traffic reflects international traffic transported as VoIP by carriers, and excludes PC-to-PC traffic.

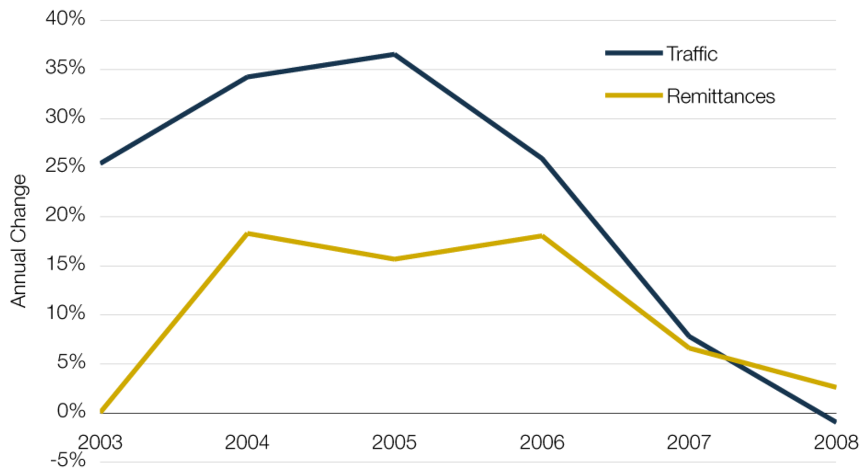
Source: TeleGeography research

In 2008, the global recession exerted a powerful drag on international call volumes. Global traffic growth slowed from 14 percent in 2007 to only 8 percent—the slowest growth ever recorded by TeleGeography. Total international voice traffic grew from 346 billion minutes in 2007 to 376 billion minutes in 2008. Traditional time division multiplexed (TDM) international traffic increased 6 percent in 2008, from 267 billion minutes to 282.8 billion minutes. International Voice over IP (VoIP) traffic grew a relatively modest 16 percent in 2008, from 79.7 billion minutes to 92.7 billion minutes. TeleGeography projects that global traffic will reach 406 billion minutes in 2009, 27 percent of which will be transported as VoIP (see Figure: International Call Volumes and Growth Rates, 1989-2009).

The slowing world economy particularly affected international traffic to Central America. International migration has served as an important driver of traffic growth from the U.S. to Latin America. The flow of calls from immigrants to their home countries closely tracks the flow of money, in the form of remittance payments to central banks. The rapid expansion of the U.S. economy (and the housing market, in particular) in the 2000s provided ample opportunity for migrant workers from Latin America, which lead to sharp increases in international voice traffic and remittance payments to families in Latin America. The collapse of the U.S. housing market in 2008 and the subsequent deep recession have had a clear impact on both remittance payments and international call volumes to Latin America (see Figure: Change in Traffic and Foreign Remittances to Latin America, 2003-2008). Traffic to Mexico, the world's largest calling destination, declined 4 percent in 2008, and aggregate traffic to Central America declined 5 percent.

FIGURE 2

Change in Traffic and Foreign Remittances to Latin America, 2003-2008



Notes: Traffic reflects TDM and VoIP.

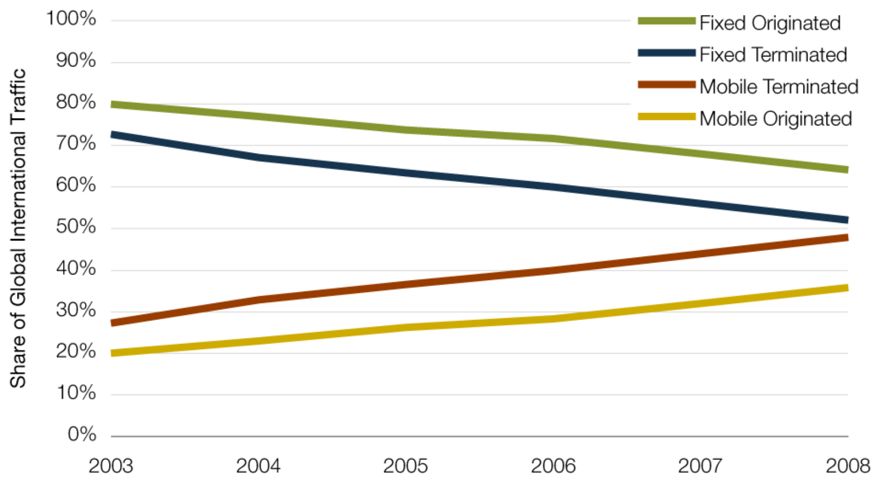
Source: TeleGeography, World Bank

International Traffic from Mobile Phones

Mobile phone subscriptions overtook fixed lines in 2002. By 2008, there were 4 billion active mobile accounts globally, accounting for 77 percent of global phone lines. In recent years, the locus of growth has shifted to developing countries. Mobile subscriber growth in Africa has led the world in recent years, growing 35 percent in 2008 after having increased 39 percent in 2007. While growth rates in Africa are tremendous, the subscriber base remains very small—mobile penetration in Africa is still only 39 percent. Subscriber growth in some developing countries has been phenomenal. India gained 112 million new mobile subscribers in 2008—a net increase that exceeds the total number of mobile subscribers in Germany. China gained 89 million mobile subscribers in 2008, and Brazil, Indonesia, and Vietnam all gained more than 30 million mobile subscribers. Conversely, mobile subscription growth in more mature markets has slowed. There, a growing number of mobile operators have begun to roll out aggressively priced international calling plans to help boost their subscriber rolls.

Mobile subscribers and operators have become a powerful force in the international voice market. In 2008, mobile-originated international traffic grew 19 percent, and accounted for 36 percent of total international traffic, up from 32 percent in 2007 (see Figure: International Calls to and from Fixed and Mobile Phones, 2003-2008). Mobile terminated traffic grew 18 percent in 2008, and accounted for 48 percent of international traffic terminated in 2008. TeleGeography projects that mobile terminated traffic will exceed traffic terminated on fixed lines in 2009.

FIGURE 3
International Calls to and from Fixed and Mobile Phones, 2003-2008



Source: TeleGeography research

Wholesale Carriers and Services

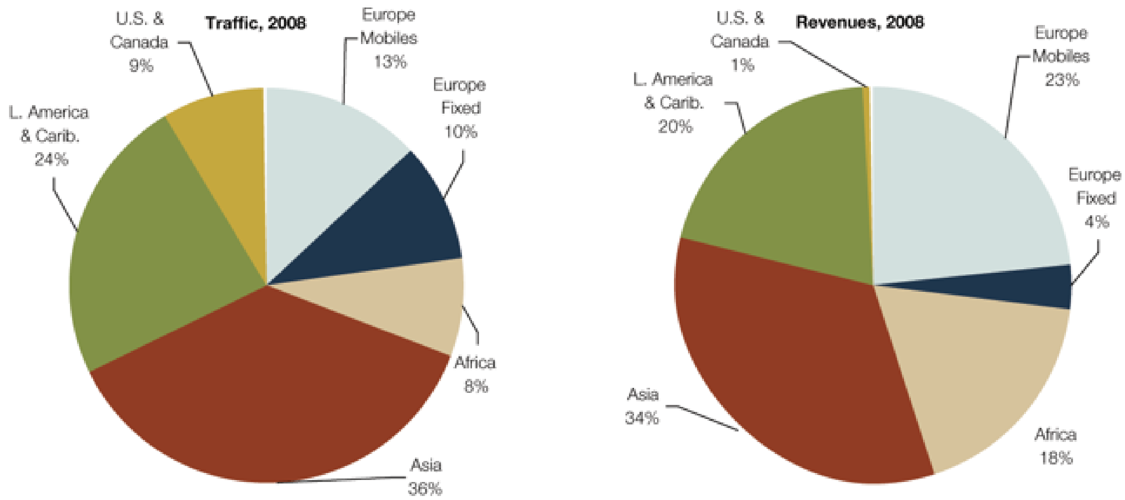
A highly developed international voice wholesale market has emerged in the past decade. Many retail service providers, including wireless network operators, calling-card providers, and new market entrants, rely heavily on wholesale carriers to transport and terminate their customers' international calls.

Some regions receive disproportionately large volumes of wholesale traffic. For example, 83 percent of traffic terminated to Central Asia, Sub-Saharan Africa, and South America was terminated by wholesale carriers. Conversely, only 39 percent of traffic to Western Europe and 46 percent of traffic to North America was terminated by wholesale carriers. Within Western Europe, however, 52 percent of traffic to mobile phones was routed via wholesale carriers (see Figure: Traffic and Wholesale Revenues by Destination Region, 2008).

The year 2008 marked a sharp downturn in overall revenue growth for the international wholesale market. International wholesale traffic revenues grew by only 3 percent between 2007 and 2008, compared to 11 percent growth in the previous year. This result stemmed primarily from lagging traffic, not from falling prices. The decline in traffic from the U.S. to Central America was particularly harmful. While overall wholesale revenues grew—albeit slowly—wholesale revenues for calls to Central America actually *declined*, from $1.4 billion in 2007 to $1.1 billion in 2008.

FIGURE 4

Traffic and Wholesale Revenues by Destination Region, 2008



Notes: Data reflect wholesale TDM plus wholesale VoIP traffic volumes.

Source: TeleGeography research

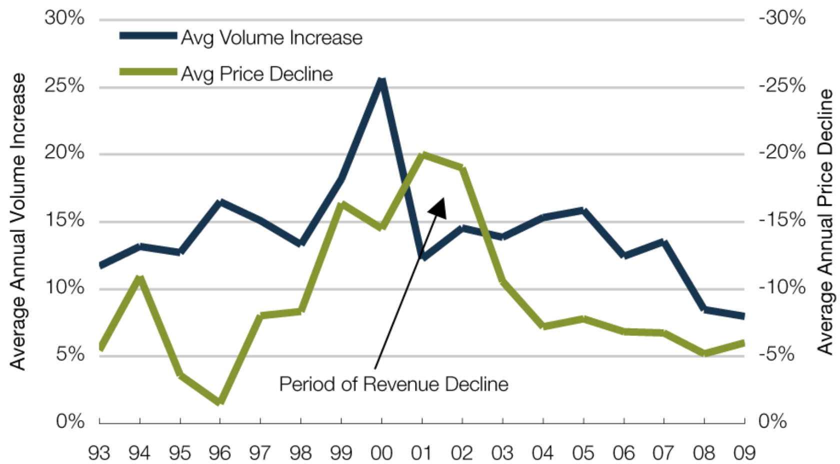
Prices and Revenues

In telecom, it seems prices can only go down. Retail call prices have declined every year since TeleGeography started tracking international call prices in 1988. The world average retail price of an international call is now less than one-fifth of the $1.20 per minute price from 15 years ago. Despite the steady decline in prices, retail revenues have inched upwards, as volume growth offset price decline (see Figure: Rate of Price Decline versus Volume Growth, 1993-2009). Revenues have held up, in part, because prices are no longer falling nearly as quickly as they were a few years ago. World average retail prices dipped by only 5 percent in 2008, compared to a 19 percent decline in 2002.

Although average industry revenues have remained stable, international carriers hardly face a rosy future. Prices are no longer falling as quickly as they did at the beginning of the decade, but neither are carriers' costs. For several years in a row, carriers have seen prices fall faster than their own termination costs, squeezing per-minute margins. Wholesale carriers face particularly thin margins. iBasis, for example, reported an average 0.61¢ margin per minute for its wholesale traffic in Q2 2008. The company managed to increase this margin to 0.64¢ by Q2 2009, but only while shedding 1.5 billion minutes of low-margin traffic. Several wholesale carriers have indicated to TeleGeography that they are shifting their emphasis from volume growth to margin stability.

FIGURE 5

Rate of Price Decline versus Volume Growth, 1993-2009



Notes: Data reflect both TDM and VoIP volumes. Periods where volume increases outpace average price declines mark a period of revenue growth. When price declines outpace volume increase, revenue declines. Data for 2009 are projections.

Source: TeleGeography research

Outlook

TeleGeography projects that global international voice traffic will grow approximately 7 to 8 percent annually between 2009 and 2011, well below the trends recorded over the past 25 years. Recent trends suggest that challenging times lie ahead.

Traffic growth is slowing. At the beginning of this decade, carriers could rely on double-digit annual traffic growth to bail them out from the effects of rapid price declines. Now, the inverse holds true. Prices are no longer in free-fall, but traffic growth has decelerated. The traffic slowdown was particularly dramatic in 2008 due, in part, to the faltering world economy. The economy's drag on traffic growth is a temporary phenomenon, and will abate as the economy eventually improves. However, its effects mask a more permanent threat to international carriers: computer-based voice services are siphoning away traffic.

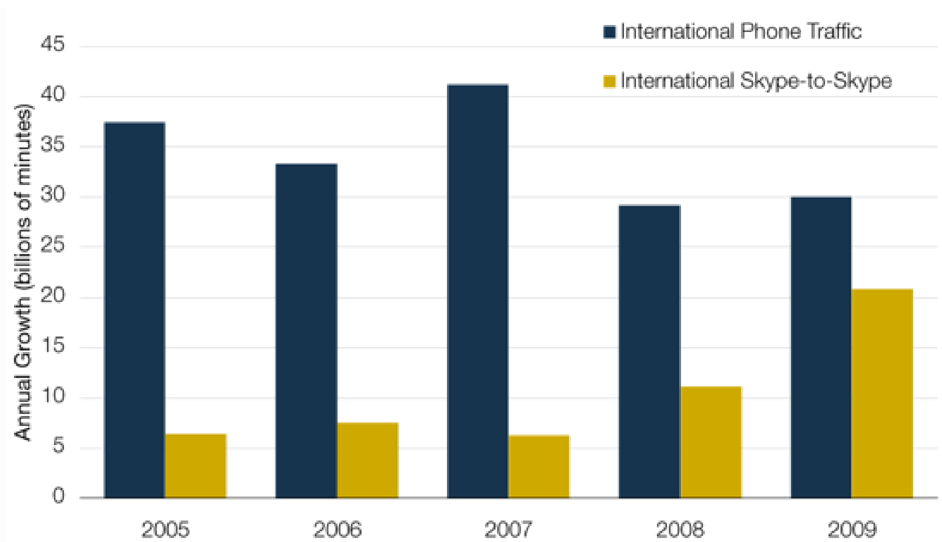
Voice traffic is moving off of the PSTN. Computer-based VoIP, and Skype, in particular, are large enough to have a meaningful impact on the international voice market. TeleGeography estimates that Skype users generated 33 billion minute of international "Skype-to-Skype" traffic in 2008 and projects that Skype's on-net international traffic will reach approximately 54 billion minutes in 2009. In the span of 6 years, Skype has emerged as the largest provider of cross-border communications in the world, by far.

The volume of traffic routed via Skype is growing at an astonishing pace. Skype's international traffic is projected to increase by approximately 21 billion minutes in 2009, compared with 11 billion minutes in 2008. By comparison, TeleGeography projects that the total volume of international traffic terminated by carriers to fixed and mobile phones will increase by approximately 30 billion minutes (see Figure: Net Increase in ILD and International Skype Traffic, 2005-2009). Given these immense traffic volumes, it's difficult not to conclude that at least some of Skype's growth is coming at the expense of traditional carriers. If all of Skype's on-net traffic had been routed via traditional telcos, global cross-border telephone traffic would have increased 11 percent in 2008 and would be projected to grow 12 percent in 2009.

International voice is becoming a "loss leader." International communications is no longer a core business for some carriers. A growing number of telecommunications companies are offering flat-rate or heavily discounted international calling service to attract and retain subscribers to their bundled fixed-line or mobile phone services. These calling plans have often led to marked increases in international call volumes, if not international call revenues. Carriers' willingness to offer free or flat-rate international service is an indication that they no longer view international voice as a source of revenue in its own right.

FIGURE 6

Net Increase in International Phone and Skype Traffic, 2005-2009



Notes: International phone traffic reflects carrier TDM and VoIP. Skype traffic growth reflects Skype-to-Skype traffic only. Data for 2009 are projections.

Source: TeleGeography research

In light of these trends, TeleGeography believes that a growing number of retail service providers, including many incumbents, will choose to get out of the business of transporting and terminating international voice traffic. BT's announcement in June 2009 that it would essentially outsource much of its international voice termination to Tata Communications underscores this trend. Rather than investing capital in a segment that faces both daunting challenges and limited growth prospects, many service providers will choose to outsource their international voice termination or to merge their international carrier business into that of a larger entity.

The content on the preceding pages is a section from TeleGeography's TeleGeography Report

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