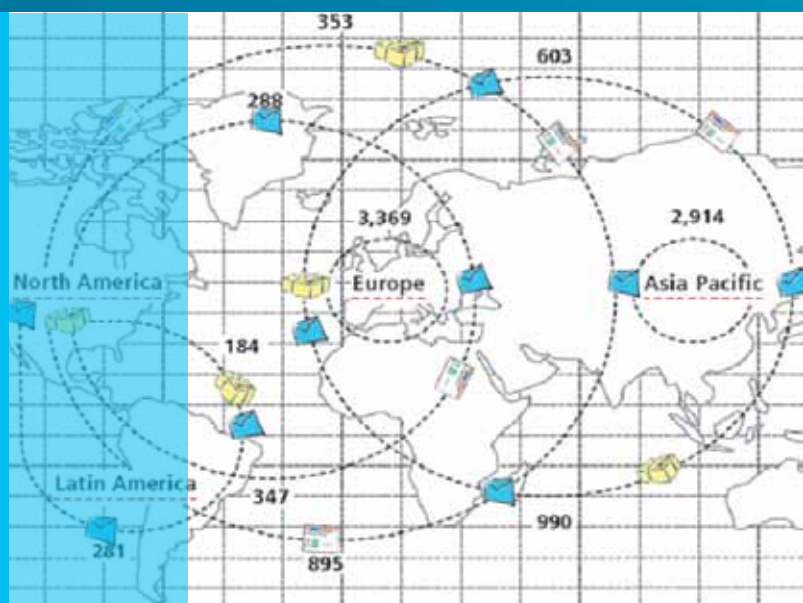


# Market Research on International Letters and Lightweight Parcels and Express Mail Service Items

Report



UPU | UNIVERSAL  
POSTAL  
UNION

# Market Research on International Letters and Lightweight Parcels and Express Mail Service Items

Report

Submitted by



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**Adrenale Corporation is solely responsible for the content of this report.**



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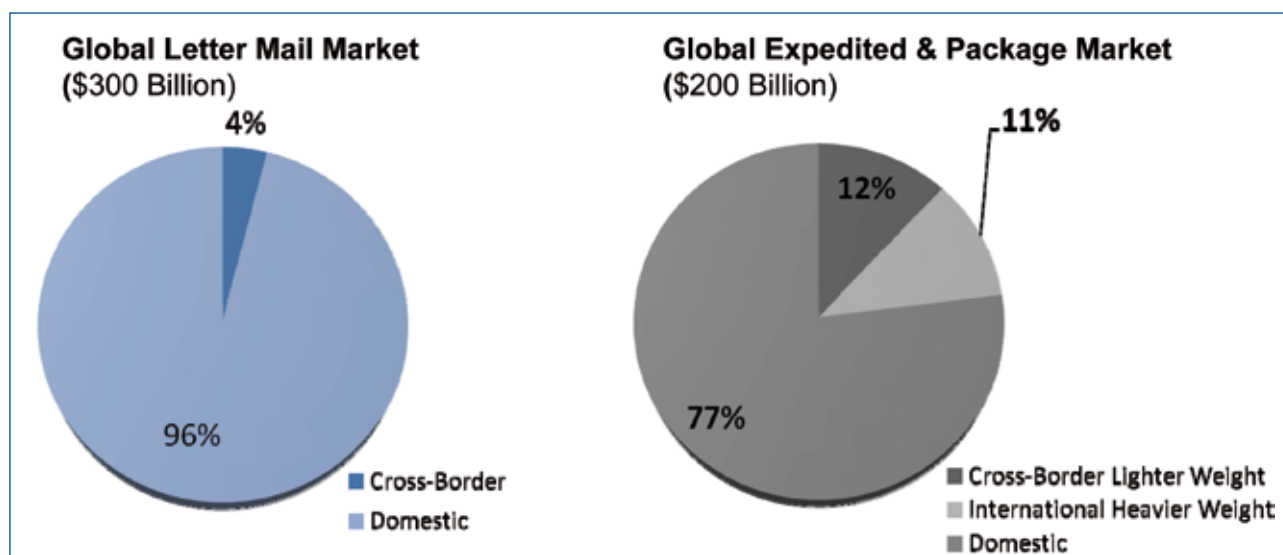
# 1. Executive Summary

Postal service providers have been trusted with people's messages, merchandise and money for hundreds of years. They touch just about every home and every workplace in the world. They are tremendously far-flung, with deep roots in every community. They are the engine that drives a close to \$2 trillion mailing industry worldwide, responsible for some 20 million jobs. And, they are challenged both as digital technology alters hard copy communication, and physical shipping, and as declining economies around the globe erode their principal revenue bases. Postal operators understand that they must transform themselves to meet the ever changing communication-channel and transportation preferences of their customers. Under the leadership of the Universal Postal Union (UPU), a call to action has been issued so that the direc-

tion of the future can be influenced positively, and a new level of volume growth, financial stability - and success - can be brought to the postal sector.

The International Bureau (IB) of the UPU has therefore sponsored this market research and analysis program to gather information, and provide insight and guidance, with the aim of supporting and facilitating the development of UPU strategies and action plans. Figure 1 presents the share of the international light-weight mail and shipping segments in proportion to the total \$500 billion global postal delivery market. Although the focus of this study is on cross-border postal services, the possible impact of domestic demand factors on international traffic has also been examined.

Figure 1 The Cross-Border Market as a share of the Total Global Postal and Package Market



Source: Analysis by Adrenale Corporation

The market for international light-weight postal items is a very competitive, yet somewhat concentrated market with a higher and increasing market penetration by participants other than the designated national postal operators (DOs or DPOs) compared to domestic mail markets. DOs have faced decreases in their market shares in terms of volumes over the last decade (1998-2008) irrespective of the segment, from 93% to 85% in the letter-post, and from 30% to 26% in expedited and parcels services (E&PS). In terms of revenue, the decline was from 93% to 85% in letter-post, and from 19% to 16% in express and parcels.

Because the cross-border market is de facto deregulated and intensely competitive with a strong participation of private sector and foreign public operators, and intermediaries, international light-weight streams are often

channeled outside the UPU's regulatory environment. Market players have, for years, exploited structural and pricing gaps for arbitrage. Although the market is competitive, cooperation between market participants and even former rivals has also emerged through a wide array of partnerships and joint ventures that have encouraged service providers to operate with bilateral or multi-lateral arrangements that by-pass the UPU systems of remunerations for letter, flats, packets, parcels and express mail items exchanged internationally.

## Regional Developments

Operators' market performance generally varies from one region to another and even within region, reflecting the different conditions and dynamics of the global cross-border mail, and light-weight package and express markets. The larger markets in terms of revenues and sales

of cross-border postal and express services are located in North America, Western Europe and Asia Pacific with 1.5 billion items (22% of the global market), 3.2 billions items (48%) and 0.8 billion items (8%) respectively. In the last decade, other non-designated operators have been growing in all regions at a much higher compounded annual growth rate in terms of volumes and revenues – both in the range of 3% to 6 % – relative to designated national operators with declines in real revenues and a more moderate growth in the volumes of express and parcels. As a result, designated operators' market shares declined significantly – ranging from -6% to -34% in terms of revenue, and from -5% to -27% in terms of volumes. The worst market performances of designated operators have been in the developing regions of Latin America, Eastern Europe, Africa and the Middle-East.

### Price Comparisons

The average prices of cross-border postal, package and express services have remained relatively stable over the decade 1998-2008, increasing by a compound annual nominal growth rate (CAGR) of 2.4% for international letter-post corresponding to a 1.8% real price decrease for the mail of designated operators – after taking into account inflation – pointing to an increasingly competitive market. As for the international E&PS market, non-designated operators have faced a nominal CAGR of 2.0% in their segment, which correspond to a -2.2% real decline in the price level, which could be either interpreted as a sign of a cut-throat express and parcels market, or an accelerated share shift from the high-end premium services to lower-end standard services and from the heavier- to the lighter-weight segments. It can be noticed that the average prices of designated operators relative to non-designated operators has remained rather stable over the period with a similar relative price in the international letter-post (from a 1.02 ratio in 1998 to a 1.00 in 2008) and almost twice the average price difference in E&PS for non-designated (from 1.82 ratio in 1998 to a 1.77 ratio in 2008).

In terms of costs that affect pricing, terminal dues (TDs) are considered an important cost element in setting international tariffs for letters and small packets. For parcels, the inward land rates are applicable. An analysis of these international access charges shows that their relatively low share in international tariffs for letters and cards produces a somewhat substantial margin at the posting country, encouraging re-mailing and direct injection. As letter volumes decline and DOs raise rates to preserve postage revenues, the opportunity for by-passing the UPU TD system becomes more evident, favoring multi-lateral alliances based on negotiated agreements among DOs. The heavier weight items appear over remunerated in the transition system as a result of the application of the rate per kilogram, making small packets more expensive in DC than in IC countries. This results in a direct negative impact on the postal development of the countries concerned.

### Elasticities of Demand

The statistically significant findings with respect to pricing show that, in general, cross-border letter mail shows greater price sensitivity than parcels and express. This is due to the existence of lower priced alternative physical dispatching channels and a myriad of electronic alternatives; and the changing composition of the international letter stream away from correspondence mail in favor of direct mail, printed matter, and small packets, which are susceptible to rate hikes, particularly as competing service providers fight for these areas of anticipated growth with special discounts and contractual arrangements.

Standard lighter-weight parcels, handled mainly by DOs, and express items carried by non-designated operators are relatively price-inelastic. The former is probably due to the non existence of good choices or substitutes, while the latter reveals the existence of a pricing power obtained thanks to customers' perception of a branded and integrated service clearly differentiated from the express mail services of DOs. EMS customers, unlike those of the integrators' guaranteed overnight services, are highly sensitive to price. The EMS product probably has a high price-elasticity because the customers that use DOs tend to be upgrading from a standard service.

The analytic significance of other economic and demographic variables point to international exports as a major factor of influence in the evolution of outbound mail, parcel and express services. The greatest impact of trade is on express volumes with a close to 3% increase in cross-border express shipments for every 10% increase in the value of exports. The demand for international letters and parcels is slightly less correlated with trade, as the same 10% increase in exports results in a 1% to 2% growth for mail and packages, respectively. Other relationships identified statistically point to a relatively mild level of electronic substitution, with a 10% increase in internet connections leading to 0.3% decrease in the volume of international letters, and a positive although modest e-commerce impact with a 10% growth in internet connections influencing a 0.4% increase in the volumes of international packages.

### Customer Preferences

Customers remain more favorable towards direct mail versus other channels. Many more consumers prefer to receive direct mail compared to those that want to get telemarketing, email or SMS promotions. Spending on cross-border direct mail has not declined as drastically as correspondence and transactions (C&T) letters, nor has it dropped as dramatically as the doomsayers had projected. Thus, the expectation is that cross-border letter volumes would only recover if advertising mail leads the demand curve.

Furthermore, prior to the recessionary downturn, many postal and other operators had been growing their premium and standard package volumes with their innovative

information value-added services and were benefiting substantially from Internet E-tailing and customer preferences for affordable, time-definite E&PS services. Price and value (i.e., best service for the price) are the two principal differentiators in the express and parcel segments.

### **The Opportunity for Growth**

Three scenarios have been analyzed to bracket the potential outcomes from an optimistic to a pessimistic growth in demand for mail and E&PS services. The range of plausible scenarios, for the future evolution of the demand for postal services in the next 5 years, reflects:

- the various compositions of segment volumes depending on the shape of the global economic recovery;
- the postal actions needed to introduce products and services that meet or exceed customer needs; and
- the changes in the UPU regulatory and pricing environment that would permit operators to carry out growth strategies with greater commercial freedoms to manage innovation, control costs, and deploy high-value product features that benefit their clients.

The opportunities for postal operators are substantial as world economies recover and prosper. The total international letter and E&PS market volumes and revenues would return to growth and the DOs would regain lost share by launching needed cross-border direct mail and standard package services, under the leadership of the UPU. Thus, in the optimistic scenario, the overall letter market has the potential to grow, at about 3% per year, and the DOs' LC/AO volume share would return to its 2003 level of 90%, gaining 1% per year starting from its 2008 level of about 85% volume share. In the E&PS market, total demand returns to double-digit growth, reaching 600 million shipments by 2013, mostly in the lower-priced, deferred business-sent cross-border packages. Moreover, the DOs would capitalize on the international growth in the SME segment and gain share in the E&PS market, inch up slightly from their current level of about 25% of the light-weight package volume.

In summary, the insight that can be drawn from this in-depth research and analysis is that DOs have the wherewithal, with the guidance and leadership of the UPU, to seize the opportunities that are available and to get on the optimistic track of returning to a 1% to 4% annual volume growth.



## 2. Background

The International Bureau of the Universal Postal Union (UPU) has sponsored the current research initiative that is embedded primarily within a UPU Congress resolution concerning “the future work on the development of an action plan for letter post”. The secondary driver of this research initiative is another UPU Congress resolution on “the future work on remuneration systems for letter-post items exchanged between designated operators of UPU member countries”.

Furthermore, the Postal Operations Council (POC) has decided to extend the research focus to lightweight parcels and express mail services.

This research and analysis is needed to develop the strategies, plans, and initiatives necessary to transform and modernize the current systems and practices of exchanging cross-border mail, and expedited and package services (E&PS) which have a substantial impact on the financial performance of postal operators.

During this period of significant change, UPU and postal executives and managers are seeking factual analysis and insight to identify and exploit the opportunities for enhancing the effectiveness of the UPU system. This puts extra demands on developing stand-out transformation strategies and plans to secure timely service delivery at outstanding quality levels, while remunerating the participants in the sending and receiving value chain fairly and incentivizing the continuous improvement of operations and infrastructure, and the introduction of novel services and management procedures, and substantially improve the operational performance of international letters and parcels at the various service levels.

In an increasingly information-based, intensely competitive global economy, postal operators recognize the need to modernize their processes and practices, enhance their financial performance, re-think their co-opetition (cooperation and competition) strategies, grow their revenues, and extend their processing and information infrastructure and technology-enabled services as an essential prerequisite for driving volume and revenue growth and increasing their economic and marketplace relevance.

### 2.1 Data and Sources

The report adopts an empirical approach based on actual and estimated data. For this purpose, a detailed database<sup>1</sup> was developed. It includes historical cross-border volumes

and revenues by product category (e.g., Letters, parcels, expedited items) and other relevant country and postal information (e.g., GDP, trade, migration, households, population). The volumes of other non-DO operators are determined based on country reports from regulators and governments auditors, postal authorities, associations and research entities, and others. To develop this database we carefully reviewed published details of mail and package data and trends, examining the analyses and views of various postal stakeholders and market participants. Main sources included also the data released by the designated postal operators<sup>2</sup> such as annual reports, publications, studies, public presentations and regulatory filings. Additionally, we examined reports and studies from regulators, governments, academics, industry experts, researchers, investment analysts and consultants<sup>3</sup>. For market, couriers, and other players' volume data, the sources of information further included the research firms that track flows like Boeing and Colography, the conference and exhibition schedulers like Triangle and the Courier and Parcel Logistics Expo, as well as associations that keep track of members' needs and concerns.

The study has the appropriate geographical coverage that enables important findings and conclusions on the following markets: North America and Caribbean; Latin America (Central and South Americas); Europe; Eastern Europe; Africa and Asia Pacific. The research also examines a few smaller-volume countries together to enable the drawing of insights into the evolution of lower traffic and postage revenue developing countries.

The first step in determining the demand profiles for the different international postal products and services was the selection of countries that are representative of the regions being studied and account for a large proportion of the cross-border volume. The countries that we are selecting not only account for about 80% of the overall international postal business in the market segments and business areas of focus, they are of sufficient variety to account for different country sizes (population, area) and cultural and demographic differences. The chosen countries in the respective regions are:

- North America and Caribbean Region – Bahamas, Barbados, Canada, USA.
- Latin America Region – Argentina, Brazil, Chile, Colombia, Mexico.
- Western Europe Region – France, Germany, Italy, Spain, Sweden, Switzerland, UK.

<sup>1</sup> The Database (2009) is in spreadsheet form and contains 11 years of data from 1998 to 2008.

<sup>2</sup> Throughout this paper we refer to the incumbent or designated posts as the “national postal operators” or DOs. Other names commonly used elsewhere include ‘universal service providers’ ‘public posts’ “designated postal operator”, or ‘postal administrations’. Our designation is intended to make no distinction of whether the posts are public or private, or operate predominantly with commercial practices.

<sup>3</sup> Official postal volumes, reported by the posts are not always accurate or complete. In particular, data reported to institutions (e.g., UPU, IPC) that accumulate data by means of surveys are not necessarily filled accurately or completely. Further, postal data do not include other market players, and it is not clear that posts wish to disclose the volumes they are losing to their rivals. Finally, a few posts estimate volumes by dividing revenue by official tariffs thus disregarding discounts given to mailers and understating the resulting data.

- Asia Pacific Region – Australia, China, India, Japan, Korea, Singapore. The Philippines and New Zealand were also included to examine the effects of regional consortia. This region has more countries than others because of the considerable change in market dynamics and competitive intensity.
- Eastern Europe Region – Czech Republic, Hungary, Poland, Russia.
- Africa and Middle-East Region – Cote D'Ivoire, Egypt, Ghana, Morocco, Tunisia, Saudi Arabia, South Africa, United Arab Emirates (UAE).
- A Grouping of Smaller-Volumes Countries' – A group of lower cross-border volume states have been examined together to draw insights into how the demand for letter and package services evolves in lower-volume developing nations.

## 2.2 Definitions

The marketplace is defined as the companies that participate in the actual carriage, transportation and delivery of cross-border lower-weight (less than 2 kilograms) letters and cards (LC), all other (AO) mail (e.g., periodicals, flats) and express items and parcels. As such, items that are handled by intermediaries that prepare, pre-sort, pre-automate or combine and co-mingle these items, and subsequently tender them to an operator would be counted as items carried by that operator. When the intermediary or end-user gives the items to a Private Postal Operator (even if that PPO is another post), these items and the corresponding revenues that accrue to the PPO would be counted in the competitive stream. The study is also limited to addressed mail and packages. International un-addressed mail is not included because the volume of such mail that crosses borders is minuscule, and neither measured nor reported.

A similar definition applies in the increasingly co-opetitive environment. For example, products sold at postal counters but carried and delivered by others (e.g., FedEx Global Express Guaranteed sold at USPS post offices) are counted in the competitive stream since FedEx receives most of the revenues and pays the USPS a fee that cover the cost of selling the item. Another example of co-opetition is presented by international alliances of postal operators like Spring, European Parcels Group (EPG) and Kahala Post Group (KPG). The cross border volumes of a collaborative network of postal administrations such as KPG are attributed to the incumbent at destination (e.g., Australia, China, France, Hong Kong, Japan, Korea, Spain, the United Kingdom and the United States) for delivery. The number of countries in the alliance is continuously expanding.

It is important to note that several sources of information are either proprietary or given in confidence by a particular operator, regulator, or primary research firm. Even IB-UPU and IPC information is only to be shared at the group or regional level. We did not conducting any

broad primary research in the form of massive surveying or sending of questionnaires beyond the recent IB-UPU quarterly investigation of the top public and private operators (related to the impacts of the global economic and financial crisis).

However, many telephone and personal discussions have been conducted with operators, regulators, and customers to verify the information that we collected, to test the quality of the assumptions that we made, and to gather perspectives on market dynamics. The caveats here are that:

- many of these primary interlocutors have little knowledge of the competitive intensity in their own international markets, mainly because they are completely focused on the recent declines in their domestic markets, and
- the discussions on future market needs and demand evolution are opinions and prognosis that are rarely substantiated and often off-the-record.

## 2.3 Explanation, Sourcing and Validation of the Demand Data

We include the data at the regional level in this report so as not to identify individual countries where data was provided in confidence.

More clarification of the raw data sources and estimations is being presented here. However, it is important to assure the reader that every data element compiled is based on raw data or reasonable estimation.

A dual approach of top-down and bottom-up data collection and validation has been followed in order to properly vet the data and estimations.

1) The top-down methodology takes into account the total demand determinations and market shares as reported by the various principal market participants. Integrators, foreign postal operators and other players competing in a particular region, regularly report on the evolution of size and shares in that region. They also report on their international priority revenues, volumes and yields. That provides an upper-limit on the revenues, volumes and weights being carried by each.

2) In the bottom-up process, we identify the UPU statistics as the principal source of demand data for cross-border volumes of mail and parcels carried by the national or designated postal operators (DOs or NPOs), at the country level. The UPU data are incomplete in some instances but are the most consistent mode of statistical compilation across many years. We also make full use of the research and analyses that the IB performs. As for the sources of shares and volumes carried by other operators, we rely on the periodic analyses performed by the regulators and the postal operators (e.g., benchmark and comparative studies performed by DPWN-DHL, CPC, USPS, La Poste,

Spring, and others<sup>4</sup>), associations (e.g., IPC, DMA, EMA, FEDMA, Mailing Industry Task Forces), integrators (e.g., FedEx, UPS) research firms (e.g., MRU, Colography, Triangle), and investment analysts (e.g., Morgan Stanley). This is complemented by our own proprietary research and analyses that we have been conducting for many years.

3) The principal calculations that we make to approximate demand include:

- Determining growth estimates or smoothing factors to complete the data in years (1998 to 2008) where information cannot be found.
- Applying IB-UPU survey results and regional or global level proxies in countries where data on competitive products are not readily available.
- Projecting domestic market information onto the international market. Sometimes, information, such as integrators' weight distributions of express & parcels services (E&PS) are not available at the cross-border level. Therefore, an estimation is made to limit our data to the lighter-weight segment based on the couriers' weight distribution. When that distribution is not readily available in cross-border packages, the domestic market mix is used.

4) The other key determination based on proportional similarities is that of the cross-border revenue generated by the DOs and the other operators in each market. The

approximation of total revenue is built up from the average price per item for the different segments as reported in the operators' annual report, tariff tables or IB comparisons. Where prices of international letter mail are unavailable or differ greatly by weight steps and destination regions, a rate equivalent to twice<sup>5</sup> the rate of a weighted domestic letter is applied.

The final database has a comprehensive multi-year set of data for the countries that account for close to 90% of the world's international volume, on the three market segments under study: mail, express and packages. An overall conclusion that can be drawn from the time-series data is that outbound international volumes are considerably erratic for almost all countries, particularly in developing regions and emerging economies. The erratic nature of international volumes, especially letter mail increases and decreases substantially for year to year, has prompted us to smooth the data so that we would reduce the effect of data collection variations.

It is essential to highlight that the figures presented in this report represent the aggregated data for the 40 countries selected, but they are likely to be representative of about 85% to 90% of the total volumes and revenues for light-weight postal items in the world.

<sup>4</sup> Acronyms include: CPC – Canada Post Corporation, DPWN-DHL – Deutsche Post World Net and DHL, IPC – International Post Corporation, DMA – Direct Marketing Associations, EMA – Envelope Mailers Associations, FEDMA – Federation of European Mailers, MRU - Manner-Romberg – m-r-u.de.

<sup>5</sup> Twice the domestic rate was determined following a comparative analysis of the weighted domestic and international rates of UPU members as prepared by the IB and presented in the spreadsheet developed in 2008: Country\_Classification\_Terminal\_Dues.XLS

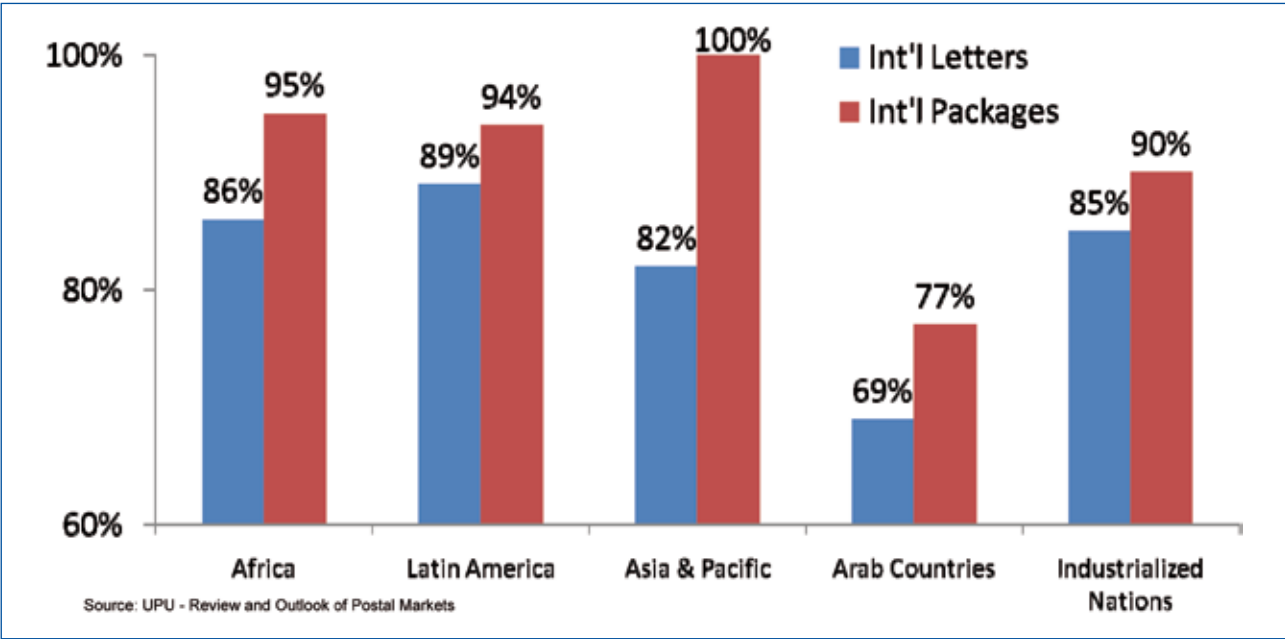
### 3. Evolution of the Cross-Border Market

A comparison of the international markets is presented at several levels of detail for various mail breakouts. At the level of mail applications we distinguish letter mail, which includes correspondence and transactions (C&T), direct mail (advertising or Ad mail), and flats (e.g., periodicals, publications); expedited services and light-weight packages. In addition to mail product, we distinguish, where possible, priority and premium (usually air mail), as well as economy, standard or deferred streams (usually surface and surface air lift items).

The international competitive environment is even more difficult to research and analyze. The UPU extensive surveying of its membership determined that operators that compete with the DOs are present in most countries (Figure 2).

Moreover, international trends -- particularly where data is sampled regularly-- have been looked at using various lenses including: sender-recipient pairs (e.g., business- or household-sent); origin-destination flows (e.g., from-to regions); and industry sectors and firmo-demographics of mailing customers (e.g., size, generation, income and technology means). We further reviewed published reports that make claims as to the causes for volume declines or for declining growth rates, and critically examined if the data supports such claims. Similar information, albeit with less specificity, is collected for competing and other operators at the country level.

Figure 2 Percent of Countries Facing Cross-Border Competition – By Market Segment & Region



Furthermore, the existing literature on international trends and dynamics has been reviewed critically and double-checked through interviews with selected entities. The current state of knowledge has also been updated and the conclusions previously drawn by postal and industry strategists examined. These analyses tend to concentrate on countries where the posts and mail associations have documented postal, competitive, demographic and eco-

nomic information with enough detail and over a long enough period of time to enable the determination of dynamics and track the evolution of cross-border trends and customer needs at a detailed level.

Figure 3 presents a three-year extract of the type of data collected at the country level in preparation for the statistical scrutiny.

Figure 3 Three-Year Extract from an Industrialized Country's light-Weight Outbound Market

<b>Demand Data</b>		<b>Millions</b>	<b>1998</b>	<b>2003</b>	<b>2008</b>
<b>Revenue</b>	<b>Total DO</b>		<b>\$ 1,280</b>	<b>\$ 1,642</b>	<b>\$ 2,072</b>
	<b>DOs' Letters</b>		<b>\$ 952</b>	<b>\$ 1,283</b>	<b>\$ 1,460</b>
	<b>DOs' E&amp;PS</b>		<b>\$ 329</b>	<b>\$ 359</b>	<b>\$ 612</b>
<b>Volume</b>	Letters, DM, Periodicals		644.4	786.8	811.2
	Express & Parcels		11.9	13.2	21.4
<b>Revenue</b>	<b>Total Others</b>		<b>\$ 4,237</b>	<b>\$ 6,035</b>	<b>\$ 8,614</b>
	<b>Others' Letters</b>		<b>\$ 66</b>	<b>\$ 158</b>	<b>\$ 332</b>
	<b>Others' E&amp;PS</b>		<b>\$ 4,171</b>	<b>\$ 5,877</b>	<b>\$ 8,282</b>
<b>Volume</b>	Letters, DM, Periodicals		46.8	102.0	194.1
	Express & Parcels		86.7	110.6	141.2
<b>Economic, Demographic, Social Data</b>			<b>1998</b>	<b>2003</b>	<b>2008</b>
	GDP (PPP) \$ per Capita		31,487	35,820	45,618
	Exports \$ per Capita		2,056	2,366	3,752
	Net Migration / 1000 Population		4	4	3
	Population below Poverty		13%	13%	12%
	Inflation Rate		2%	2%	3%
	Mobile Cells per Household		0.42	0.63	2.04
	Internet Users per Household		1.02	1.51	1.82
	Literacy Rate		97%	97%	99%

Source: Adrenale's Master Database

### 3.1 Market Structure

De facto deregulation has been occurring for some time in the field of cross-border, international LC/AO mail, and expedited and package services, as designated postal operators and governments have been unwilling or unable to effectively police regulatory breaches or close re-mailing and de-averaging loopholes. Integrators, freight forwarders and private and non-designated postal operators who had originally captured large segments of the higher-value, premium services segments are now competing intensely in standard and deferred lighter-weight mail and package services.

The structure of the cross-border industry is also changing, with a blurring of the boundaries between private, semi-public, and governmental operators. Mergers and strategic alliances between private firms, between foreign and international and national operators and between private, public and government designated operators have become commonplace in the large and lucrative cross-border market. TNT and DPWN-DHL are examples of traditional DOs merging with private sector participants. Globalization is also moving some of the traditionally national postal operators (e.g., La Poste/Geopost) to go beyond the confines of their traditional core businesses and move into new physical electronic and hybrid services.

Co-opetition is further changing the structure of the market place. For example the date-certain, guaranteed

Express Mail international service growth spurred by the Kahala Posts Group has consistently been at double-digit rates (exceeding 40% in the 2005 to 2007 time period and barely dipping to below 10% in the recessionary environment of 2008-2009). The KPG international alliance of DOs now accounts for over half of the world's total EMS traffic. Backed by a guarantee and reliability on par with private couriers, the product has helped DOs regain share in the cross-border package marketplace, and has proven especially popular with small to medium business sector customers. USPS PMG and KPG Director Jack Potter attributed EMS' growth to solid performance improvements, competitive prices with no hidden charges and full end-to-end visibility. "Customers have found peace of mind with the integrated tracking and tracing capability," he said.

The French Group La Poste's decision to join KPG after 15 years of using private couriers offers insights into the future potential of cooperative endeavors. Other UPU members can benefit from KPG's lead in flexibly and periodically adding product offerings and enhancing service features, such as for Air Parcel products -- branded as Priority Mail International at the USPS. The UPU plays an important role in bringing the successes of cooperative alliances to other regions of the world, and in integrating operational and information technology networks to provide tracked, seamless, end-to-end delivery.

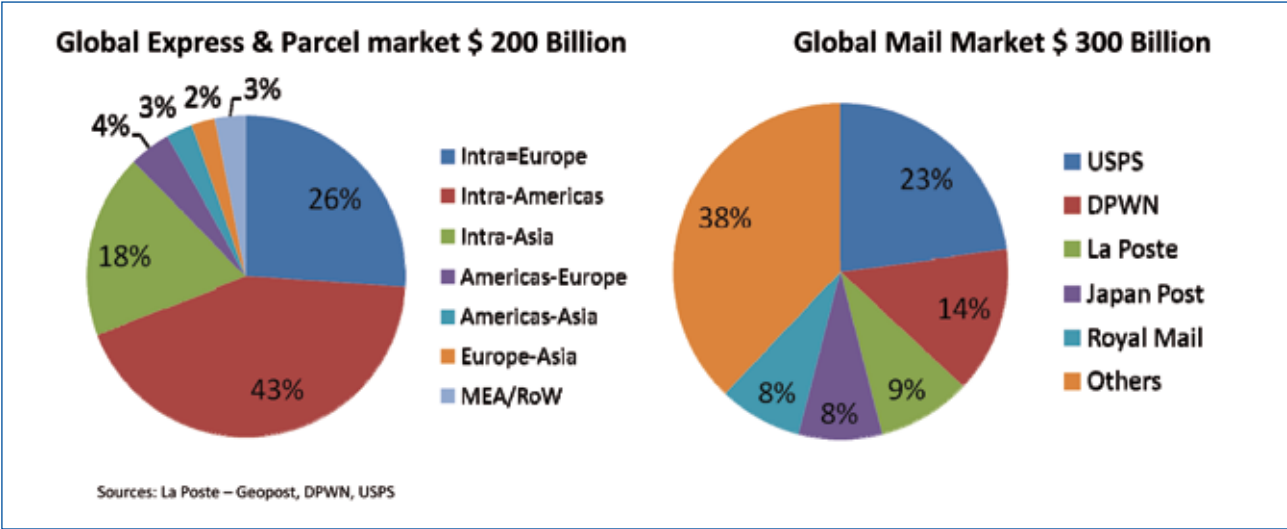
3.2 The Broader Market

The cross-border market is part of a much larger market from which most of the multi-national participants have drawn their financial strengths and laid the foundation for their international reach.

Studies have been conducted throughout the past dec-

ade, particularly, as market players prepared to enter new regions or expand their networks. Figure 4 presents the most recent estimates of the worldwide market for mail and package services. In 2008, the global Expedited and Package Services (E&PS) and the mail market reached \$200 and \$300 billion, respectively. The top four participants account for close to 60% of each market.

Figure 4 The Worldwide Market for Letters & Documents, Express and Package Services

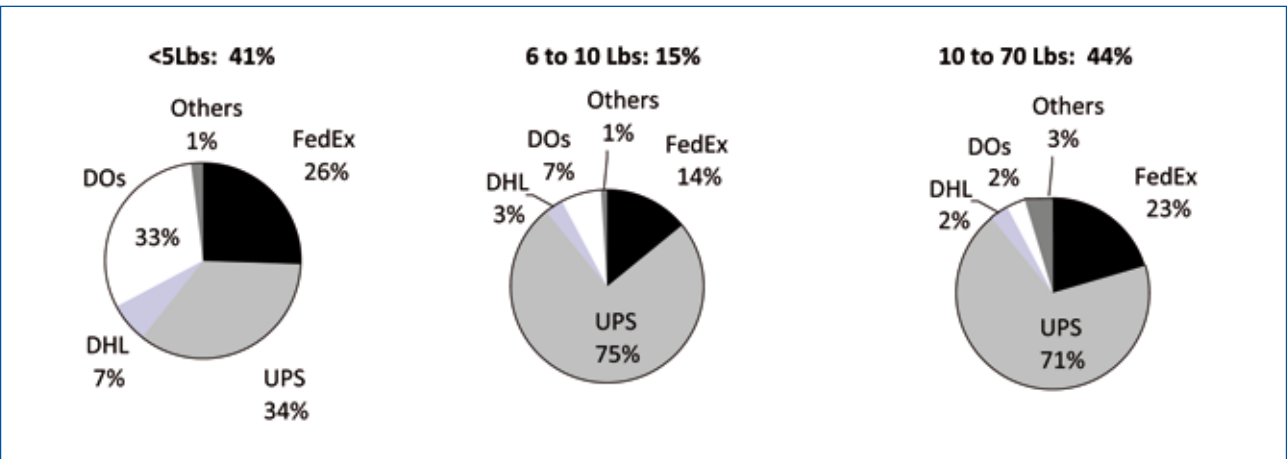


In terms of volumes, the mail market reached 430 billion items, and the E&PS market exceeded 25 billion shipments, equivalent to an average price per piece of about \$0.7 and \$8 respectively. The cross-border market is a subset of the close to \$500 billion postal market.

The global lighter-weight market, either domestic or in-

ternational, is more difficult to determine. The market research conducted by several industrialized countries provides an indication of the distribution of packages by weight. Figure 5 shows that in North America, about 40% of the shipments are less than 2 kilograms. The DOs have a substantial and growing share in the lighter-weight E&PS segment.

Figure 5 Breakdown of the North American Package Market by Weight



Source: The Colography Group



### 3.3 Market Size of the Light-Weight International Market

The global market for light-weight cross-border mail and packages, across speed and service levels ranging from standard to overnight guaranteed, reached USD 35 billion in 2008 (for 7 billion items) – or about 7% of the total USD 500 billion mail and package market. Over the 1998-2008 decade, the overall market grew at a compounded annual growth rate (CAGR) of 0.04% in terms of volumes (i.e. almost stagnation), and at a rate of 5% in terms of nominal revenues – which corresponds to a compounded annual real growth rate of 0.8% after taking into account a weighted average world inflation of 4.2% over the period.

At the market segment level, the evolution was uneven with the cross-border letter-post volumes declining at a

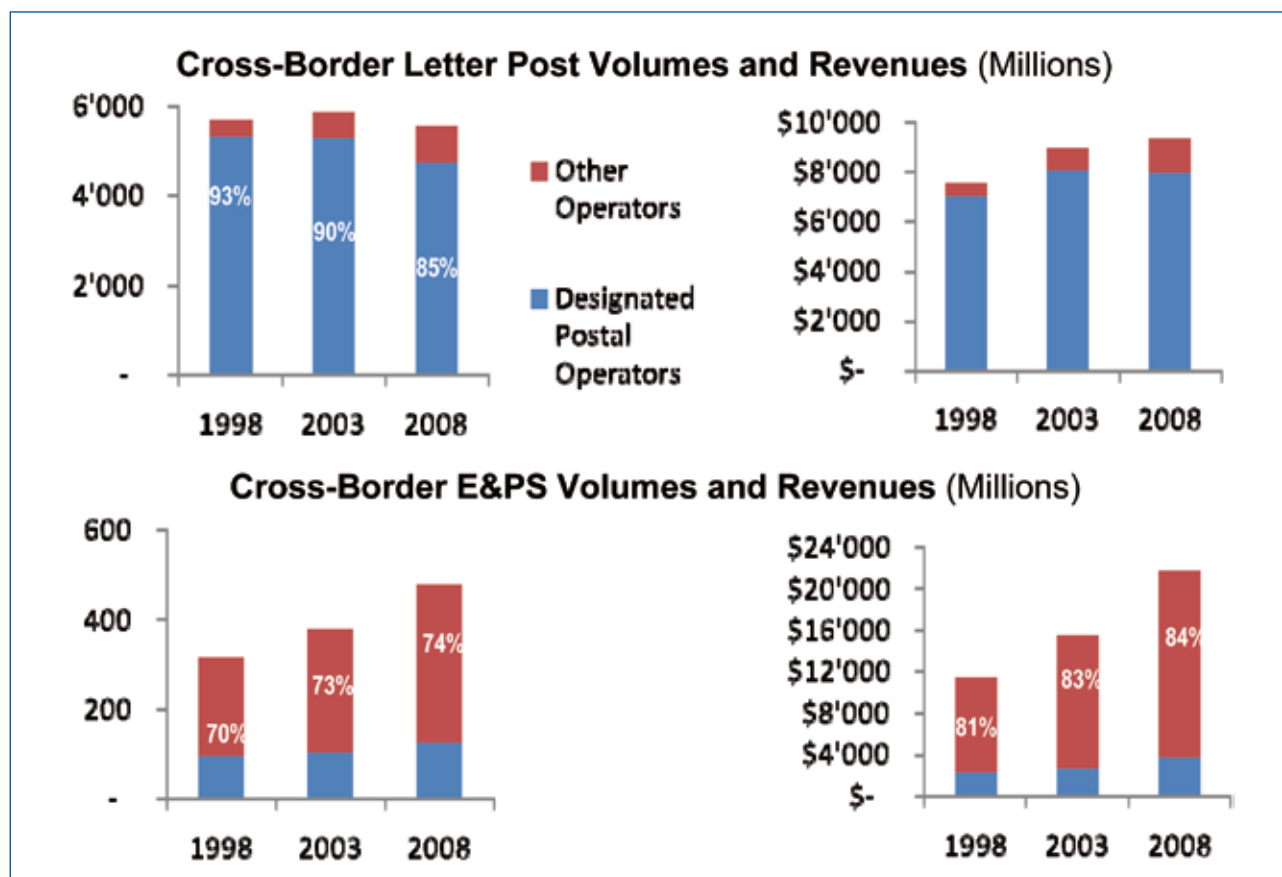
rate of 0.25 % in terms of volumes, and 2.1% in terms of deflated revenue, while the express and parcels volumes and deflated revenues were growing at a rate of 4.3% and 2.4% respectively. In the letter mail segment, the rapid growth of competing operators has not made up for the declines in the volumes transported by the designated operators in most markets.

Figure 6 shows that the overall revenue share of incumbent DOs has declined to about 37% in 2008 from over 48% a decade ago. This is equivalent to a loss of 11 share points in the light-weight segment, which had traditionally been the sweet-spot of the international market for postal operators. As the shipment weights increase, the DOs' shares become increasingly smaller, except for a few operators that have invested heavily in third party logistics services.

Figure 6 Evolution of the Global lighter-Weight International Market (Millions)

<b>Cross-Border Demand Data (Millions)</b>		<b>1998</b>	<b>2003</b>	<b>2008</b>
<b>Designated Operators Revenues</b>		<b>\$ 9,172</b>	<b>\$ 10,587</b>	<b>\$ 11,482</b>
Letters, Documents, Periodicals		\$ 6,976	\$ 7,986	\$ 7,899
Express and Parcels		\$ 2,196	\$ 2,601	\$ 3,583
<b>DOs' Volumes</b>		<b>5,396</b>	<b>5,385</b>	<b>4,845</b>
Letters, Documents, Periodicals		5,301	5,284	4,721
Express and Parcels		95	101	124
<b>Other Postal &amp; Competing Operators</b>		<b>1998</b>	<b>2003</b>	<b>2008</b>
<b>Others Operators Revenues</b>		<b>\$ 9,771</b>	<b>\$ 13,800</b>	<b>\$ 19,541</b>
Letters, Documents, Periodicals		\$ 533	\$ 929	\$ 1,399
Express and Parcels		\$ 9,237	\$ 12,871	\$ 18,142
<b>Others' Volumes</b>		<b>619</b>	<b>859</b>	<b>1,193</b>
Letters, Documents, Periodicals		399	580	839
Express and Parcels		220	279	354
<b>DOs' Shares of Light-Weight</b>		<b>1998</b>	<b>2003</b>	<b>2008</b>
<b>Revenue %</b>		<b>48%</b>	<b>43%</b>	<b>37%</b>
<b>Volume %</b>		<b>90%</b>	<b>86%</b>	<b>80%</b>

Source: Adrenale's Master Database for the 40 countries analyzed



During the 1998 to 2008 time period, the DOs' cross-border volume share dropped by almost 10 percentage points to 80% mainly due to a steady decline in the LC/AO mail stream of designated national postal operators. The substantial increase in letters and flats handled by other operators partially made up for the decline in the volume carried by DOs.

It is critical to repeat that the figures shown represent the aggregated data for the 40 countries selected. They are likely to be representative of about 85% to 90% of the total volumes and revenues for light-weight postal items in the world.

### 3.4 Perspectives on the Evolution of Cross-Border Letter and Package Services

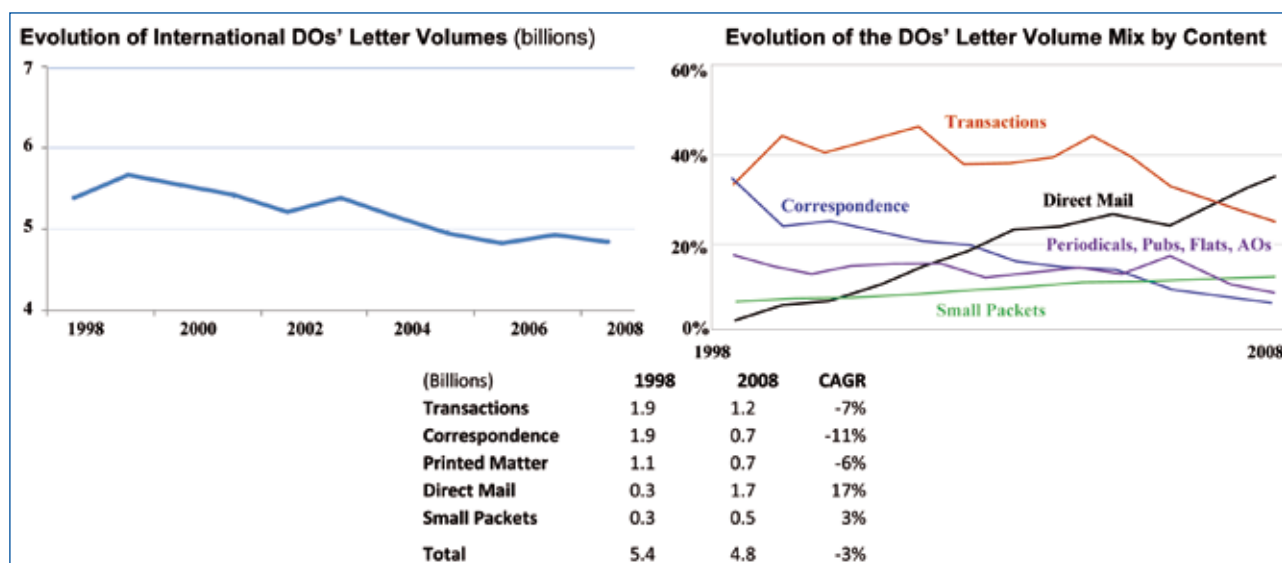
The challenge facing postal operators, that are attempting to transform their organizations into world-class entities capable of competing with integrators and other

operators, is to provide services that meet and even exceed customer expectations at affordable prices. Modern postal operations support their organization's imperative to provide value by reducing costs, improving performance, and introducing innovative and valued international products and services.

Another key challenge confronting postal services is to lock-in high-value customers in an environment of increasing liberalization and competition. As the share of direct mail as a percent of international letters increases (Figure 7), a considerable proportion of the volume is sent by relatively few clients, in key industries (e.g., financial services, traditional and electronic retailers (e-tailers), government agencies, publishers & printers, catalogers, utilities and telecommunications firms) that are able to take advantage of work-sharing solutions (e.g., presorting, drop-shipping, pre-barcoding, etc.) offered by DOs and other operators in many country of destination.



Figure 7 Changes in the Cross-Border Letter Volumes by Content



Sources: UPU, IPC, and Adrenale's Master Database for the 40 countries analyzed

The accelerating convergence and globalization of industries and markets is bringing powerful new entrants that fiercely compete in all aspects of cross-border shipments. These companies, by virtue of their aggressive expansion into more and more business and consumer applications, are profoundly changing business transactions and de facto competing for a share of the traditional postal business. This same convergence can also create opportunities for postal organizations to expand into innovative services. As a result of these dramatic changes, C&T volumes have declined steadily and have not been offset by the growth in direct mail and E&PS services.

Other factors contributing to the overall decline in market volumes include:

- Ever-demanding customers, used to advances in customer loyalty management across many other service industries (banking, telecom, hospitality, retail), begin to put pressure on traditional service businesses like postal services. Operators who are slow to adapt to the new environment risk being considered as "behind the times" and unresponsive in the areas of customer service and product innovation.
- The rapid growth of specialized services – such as *cross-border expedited, priority, express-lite and deferred shipments, international direct-entry and remail activity*<sup>6</sup> – is primarily going to private and foreign operators. They enjoyed rates of growth that are higher than for traditional DOs' letter mail. This demand fuels new entrants and alliances, product

proliferation and segmentation, as more customers demand premium services at reasonable prices or gravitate to competing services for important transactions in places where the DOs have difficulty meeting customer requirements.

- Increasing risk of mail substitution, as what used to be merely leading-edge offerings of electronic substitutes (e.g., e-mail, fax, EDI, EFT, Internet, cell phones) become commonplace. In addition, indirect mail substitution begins to occur as companies reengineer processes for competitive advantage and eliminate international transactions traditionally carried by the post (e.g., claims are streamlined; returns are filed electronically; mail orders are placed by internet; electronic banking substitutes for payments and transactions; and the proliferation of electronic commerce replaces mailed orders, invoices, payments, and mailed requests for product and service information). The just-in-time web-based ordering offsets these negative trends and results in the growth of lower-weight packages, which are sent more frequently.
- The effects of population migration and demographics are becoming increasingly complex. Trends such as the changing habits of younger generations coming of age in the age of social e-media, aging baby-boomers, population shifts to economically affluent regions, mobile populations creating urban and metropolitan revivals, and growth of multi-generation, multi-ethnic and non-traditional households, are changing the traditional patterns of cross-border flows.

<sup>6</sup> Express-lite services are express services that have one or more less features than the full global overnight guaranteed shipments. For example, they might be delivered later the day after or with a limited rather than a full guarantee. Deferred shipments are tracked packages that are delivered at lower service standards yet within a window of time (e.g., 3 to 5 days).

- The publishing sector was generally seen as showing at best static volumes, with some reduction in weight per item. Martin Seidenberg, Sr. VP DPWN-DHL's Global Mail stated that his "organization expects a real opportunity for operators to become full-service outsourcing partners and move forcefully to remote printing." joining many publishing and marketing companies that are already destination printing and drop-shipping.

As a result of these developments, the 7% annual growth in the volume handled by competing operators, in the last decade, has barely compensated for the continuous decline in the volume carried by DOs over the last decade. Thus, the overall international market volume has declined barely, despite the opportunities for a renewed accelerated growth.

### 3.5 The Value Chain

As the market shifts and international letter mail moves away from mostly consumer-sent correspondence toward a more industrialized form – with direct mail, periodicals,

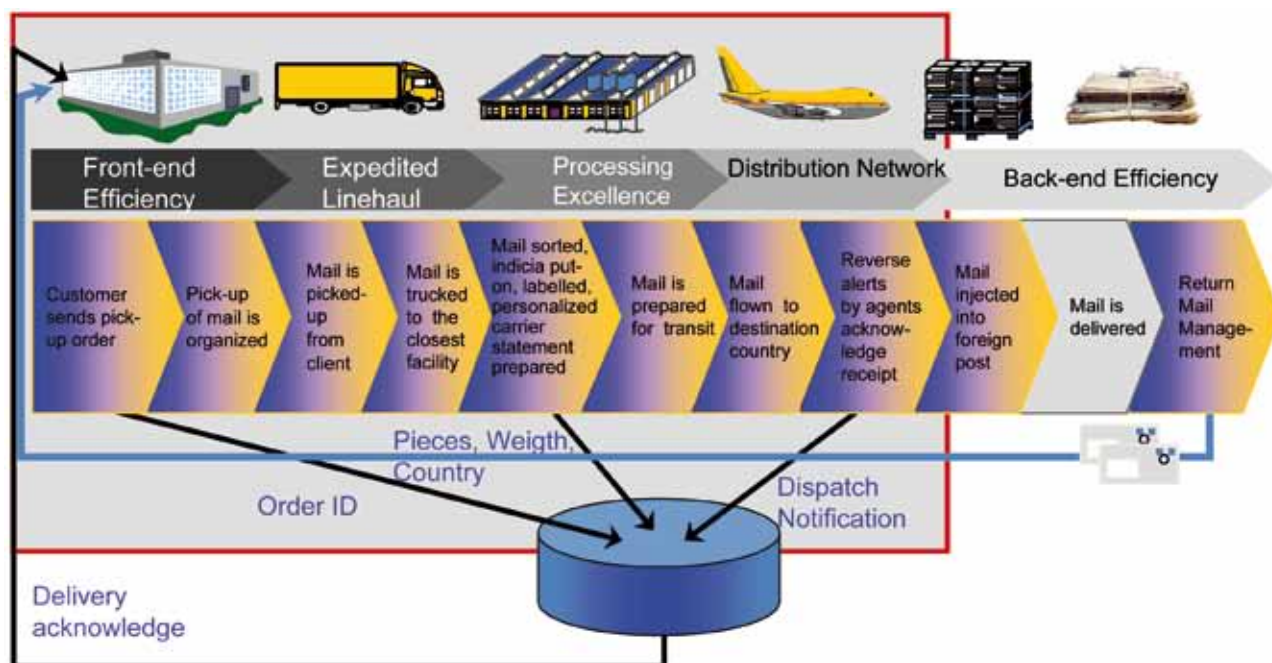
catalogs, and transactions increasing their share of LC/AO – pre-planned (where items are produced in mechanized facilities) and pre-prepared mail (where addresses are stored in databases and IT systems enable pre-sorting and pre-automation, even before physical production) begins to drive process changes throughout the cross-border value-chain.

Figure 8 shows that advances in information technology at all the market participants have improved efficiencies and reduced transit times considerably.

For example, an innovative international mail technology has been tested at several offices of exchange to change the way Customs agencies tackle mail and packages, enhancing their targeting capabilities, and providing a new enforcement tool to personnel on high alert.

The system - with different acronyms, such as the "Single Administrative Message for Postal Enterprises (SAMPLE)/ Customs Pre-Advisory System (CPAS)" - lets inspectors use risk management in processing large volumes of mail.

Figure 8 Value Chain Enhancements Are Creating Added Customer Value



Source: FedEx

SAMPLE allows for the transmission of data electronically from abroad and downloads information to a computer using an internet-based system. The originating countries send live data and inspectors review it to distinguish between high and low risk items, enabling Customs to manage people and resources more effectively. The UPU and the World Customs Organization (WCO) are develop-

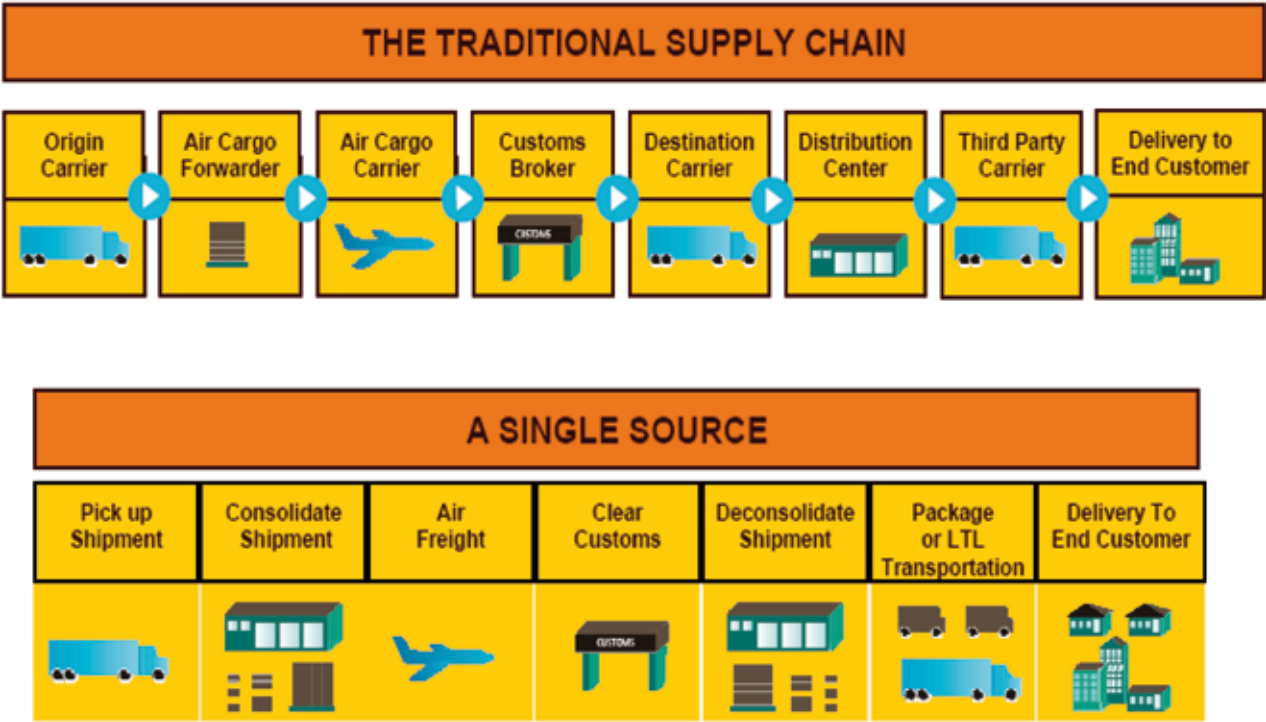
ing international standards needed to make a pre-advice system, like this, work everywhere.

As the cross-border value chain evolves, opportunities are opening up for mail service providers and aggressive operators, while former participants that took advantage of the complexities in the process are being dis-intermediated.

Figure 9 shows how the bases of competition are changing dramatically and how the process is being simplified with the reduction of hand-offs and mis-steps. A

similar streamlining is now beginning to take place in the maritime transport value-chain, where the volumes going through ports are massive.

Figure 9 Streamlining of the Supply Chain and Provision of Information



Source: Adrenale's Master Database

The redesign of the business processes along the chain allows the introduction of several new offerings ranging from financial and lending services, to paperless invoicing, to a menu of transport and tracking products including delivery intercepts, international Returns, and several time-definite delivery options to the world's most active trading markets, and automated manifesting, pre-clearance and invoicing.

The changing composition of international mail – moving from transactional to advertising and from light to heavier items – is driving new processes throughout the cross-border postal communication value chain, yet innovation seems to remain limited particularly for designated operators. The current organization of the international postal process may even sometimes – if not streamlined – constitute a barrier to the development of international mail and good exchanges.

## 4. Regional Developments

Rarely in the history of trade has the international supply chain, and the participants in it, faced such stress and strain. The world economic stagnation and the anticipated return to growth in advanced and emerging economies have created substantial opportunities and challenges for postal, transportation and logistics providers. Security concerns and a liberalizing regulatory environment have affected costs and impacted the participants' practices and processes, and have forced all players to worry about more than simply getting messages and products from origin to destination.

Asia Pacific, Eastern Europe and Central America's emergence as "factory floors" to the world has spawned directional flows along certain trade lanes. Furthermore, the growth in free trade zones has contributed to boosting international traffic. Asia-Pacific economies have just pledged to pursue a giant trans-pacific free-trade zone covering 2.6 billion people in an effort to reduce barriers not only within APEC, but also with other non-APEC economies. In this era of liberalization and globalization, free trade zones are the newest weaponry in a government's arsenal designed to usher in riches into the rest of the country. The weapons include:

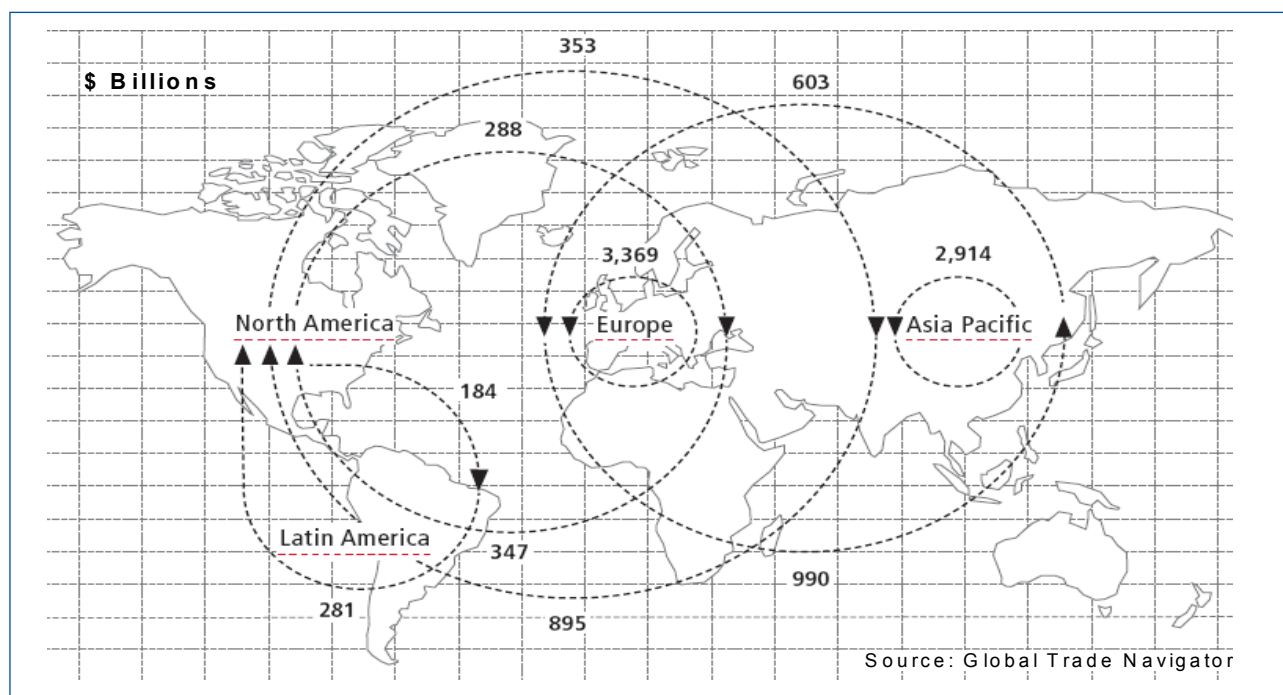
- a substantial reduction or elimination in taxes, tariffs, and fees,

- a preferential status treatment,
- a growth in the communication and settlements between a company's branches and headquarter, and
- an improved infrastructure for trade, etc.

For example, in the last few years, exchanges between the U.S. and the CAFTA nations (Central America Free Trade Agreement) have risen at twice the rate of trade with other countries in the hemisphere. Moreover, the region became a magnet for re-mailing activities. Overall, the number of industrial and logistics parks and free trade or export processing zones has risen exponentially in the last decade.

E-commerce has become a staple of global trade and is fundamentally changing ordering and shipping behavior. The global system is facing intense re-assessment as STEEP (Societal, Technological, Environmental, Economic, and Political) shocks permeate through it. Apart from economic and other factors, such as energy and commodity prices, global logistics strategy is being influenced by important long-term trends such as security, ecology, globalization and e-commerce. Figure 10 shows trade flows, which are key drivers in the growth of international mail, money and merchandise movements (M4).

Figure 10 World Trade Flows



Some of the principal dynamics that are surfacing in shipping include:

- Bundling and one-stop shopping are on the wane. The number of shippers relying on a single provider for their transportation needs has declined across the board. Single-sourcing a transportation mode is also declining.
- As businesses overtake consumers as senders of cross-border mail, the use of sophisticated optimization models, to mix premium, standard, and deferred services and minimize costs, increases.
- Despite the decline in consumer-sent mail and packages, the retail channel has gained clout in international transportation. Integrators have aggressively pursued a retail deployment strategy in key advanced economies. As documentation is simplified, postage and labels are e-printed, and forms are electronically submitted, the proportion of shipments tendered at retail access points – such as drop boxes, service centers, carrier docks and storefronts – has increased to meet the demands of busy and mobile customers.
- For the first time in its 35-year history, FedEx reported that it is transporting more goods in the standard or deferred mode than in the premium expedited and overnight services. Most of the other couriers (e.g., UPS, TNT, DHL, DPD) are reporting a similar development whereby shippers are opting for lower-speed time-definite services. Colography global research confirms that business customers have successfully resisted price hikes that could create significant yield improvement for their carriers. As a result, service providers must double their efforts to achieve profit goals through productivity gains and cost

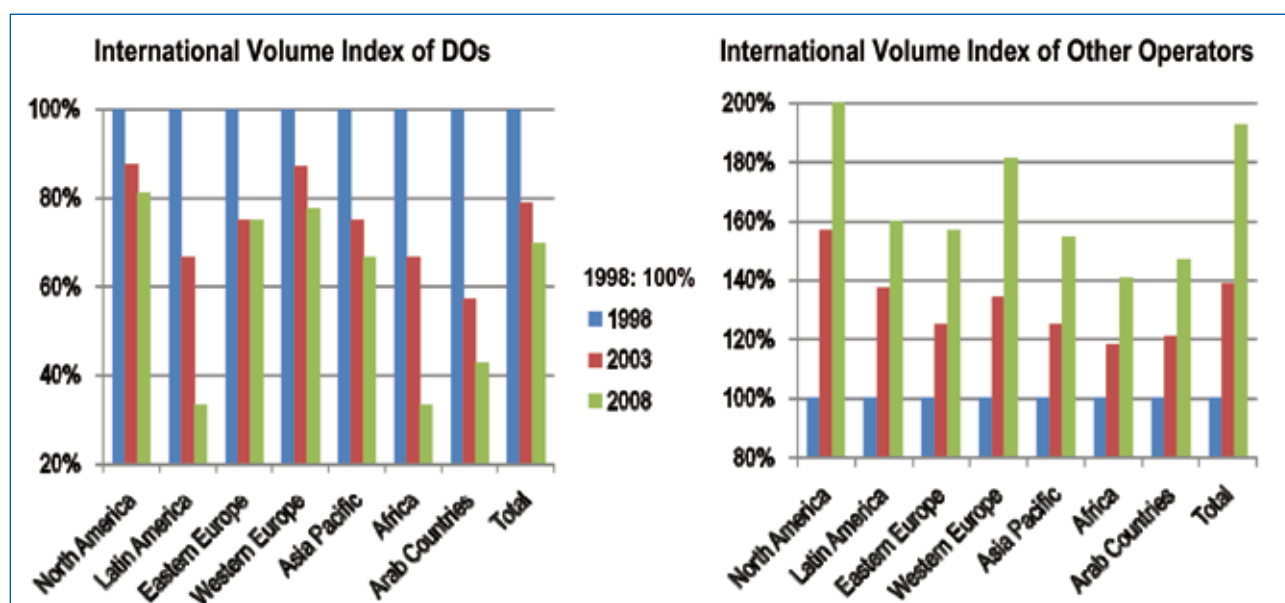
savings. Two major market dynamics are affecting E&PS providers:

- Electronic substitution has adversely affected urgent documents. With the advent of file e-mailing, broadband ftp transfers and other online up- and downloading technologies, expedited carriers' document shipping has suffered along with the DOs' own express mail services. Sometimes a back-up or original copy follows via premium services that are less expensive than guaranteed overnight services.
- Package shippers are increasingly taking advantage of the Express-Light services introduced by most service providers to take advantage of the growing B2C parcel market. These are time definite (usually 2 to 3 day delivery) products that feature the principal attributes (e.g., tracking, customs clearance) of the more expensive guaranteed overnight services.

These trends augur for a significant shift in the distribution strategies of market participants. Businesses that send merchandise and packages are transitioning from a near-total reliance on long-distance supply chains to a more balanced model that includes intermediate feeder points and greater use of short-haul transportation. They are re-evaluating their over-reliance on expensive air shipments, in an attempt to reduce costs during the recent periods of economic stagnation.

Unfortunately, it appears that whatever growth opportunities existed in the marketplace have not materialized for DOs. Figure 11 shows that the DOs' regional decline in annual volume has ranged from 2% to 9% in last decade and has only been offset in some liberalized markets by the rapid growth (8% CAGR) in the volume carried by other non-designated postal operators.

Figure 11 Evolution Index of Cross-Border Volumes Market Total and by Region



Sources: Adrenale's Master Database for the 40 countries analyzed



Operators' market performance generally varies from one region to another and even within region, reflecting the different conditions and dynamics of the global cross-border mail, and light-weight package and express markets.

The larger markets in terms of revenues and sales of cross-border postal and express services are located in North America, Western Europe and Asia Pacific with 1.4 billion items (23% of the global market), 3.1 billions items (55%) and 0.7 billion items (7%) respectively. In the last decade, other non-designated operators have been growing at a much higher compounded annual growth rate in terms of volumes and revenues – both in the range of 3 to 6 % – relative to designated national operators with declines in real revenues and a more moderate growth in volumes in express and parcels.

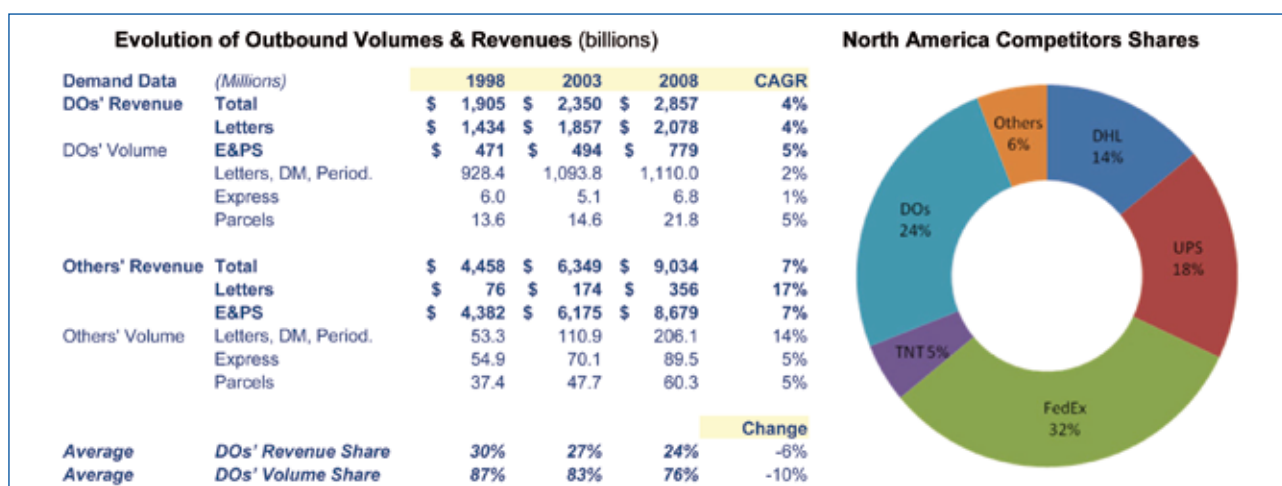
As a result, designated operators' market shares declined significantly in all regions – ranging from – 6% to -34% in terms of revenue, and from -5% to -27% in terms of volumes. The worst market performances of designated operators have been in the developing regions of Latin America, Eastern Europe, Africa and the Middle-East.

#### 4.1 North America

The North American cross-border market for letters, flats and lower weight packages, ranging in service levels from deferred to premium to guaranteed-overnight, exceeds \$11 billion.

Figure 12 shows where the international outbound market for the carriage of mail stands, how it has evolved and how the two leading US integrated carriers dominate it, handling about half of the revenue.

Figure 12 North America International Outbound Light-Weight Market



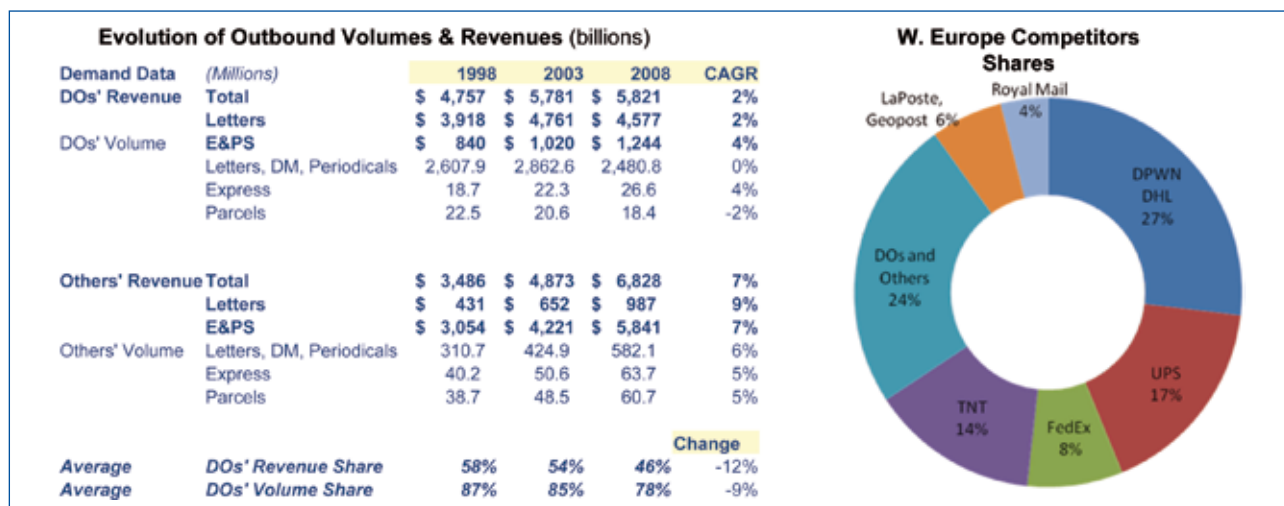
Sources: Adrenale's Master Database for the 40 countries analyzed, UPU, IPC, Boeing and Colography

## 4.2 Western Europe

Although the European postal services sector once again stands on the threshold of significant further liberalization in the domestic markets, it has been fully open and competitive in the cross-border segments for some time.

Figure 13 shows the distribution and evolution of the \$12 billion Western European cross-border, lighter-weight letter, express and package market. Many European postal operators are expanding beyond their borders, acting as private operators in neighboring countries in competition with designated DOs, and pursuing a leading role in other mail and package markets.

Figure 13 Western Europe International Outbound Light-Weight Market



Sources: Adrenale's Master Database for the 40 countries analyzed, UPU, IPC, Boeing and Colography

The European posts are looking to cross-border direct mail and parcels for growth. But, the international cross-border markets in Europe are becoming much more competitive.

For example, in the UK, Swiss Post, La Poste, Belgian Post and Direct Link (Sweden Post) do not yet compete with Royal Mail domestically but have done so for over a decade internationally.

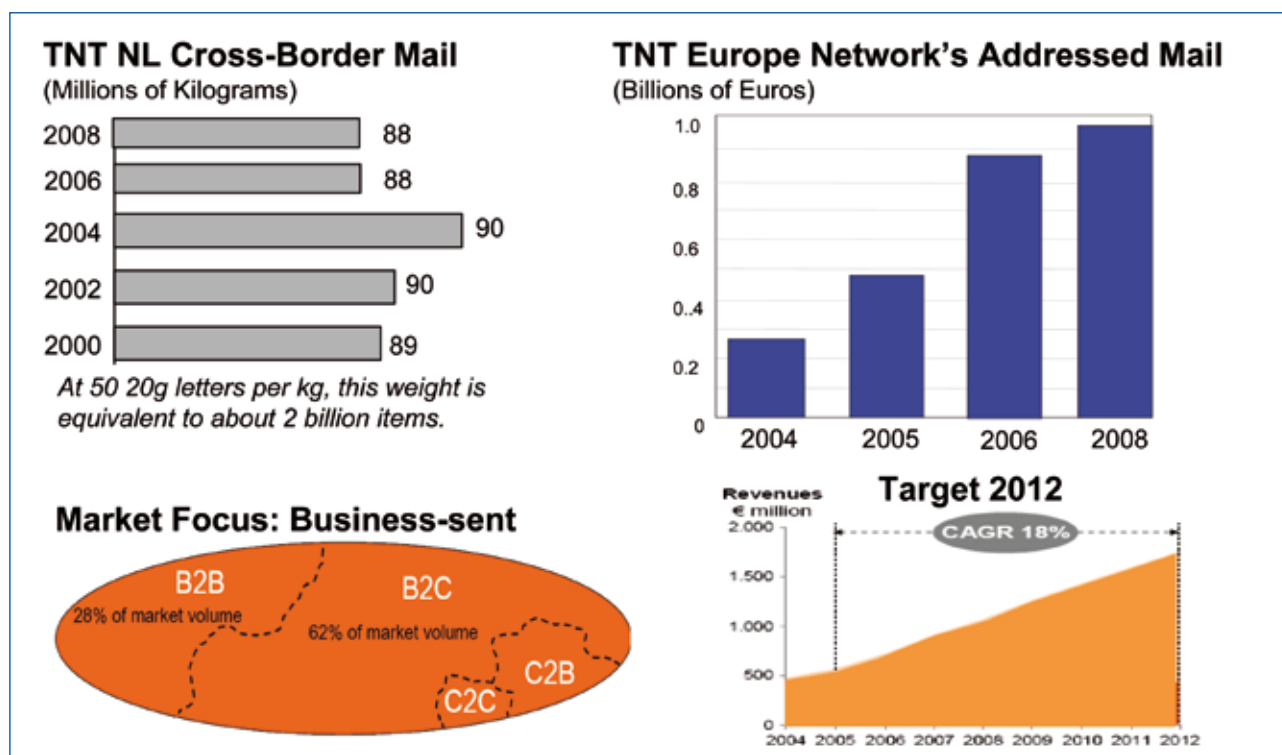
Swiss Post alone has a \$60 million cross-border turnover in the UK. The main exception is TNT, which is not only a leading downstream access domestic client of Royal Mail, but is also the majority partner in Spring Global Mail (in which Royal Mail has a 25% minority shareholding). Figure 14 displays the substantial growth of TNT's Euro-Networks.

Market players recognize that although traditional cross-border advertising traffic in Europe is at best static if not

reducing and transactional mail is plummeting, there is an opportunity to offer a much broader range of added value services and closed-loop solutions such as returns with forward fulfillment distribution plus catalogs, invoices and statements; and finally a slew of electronic and hybrid services.

They also realize that new types of international shippers are seeking effective ways to market to their (e-commerce) domestic or international customers. Some participants are pushing full value-chain project management to their key clients, including mail consolidation, alternative delivery and direct entry services; inventory, fulfillment and other logistics services. Mail operators are convinced that e-commerce will drive up volumes of cross-border B2B and B2C traffic, but it is how they can stimulate related demand for direct mail that creates a further opportunity.

Figure 14 European Mail as the Engine of Growth for TNT



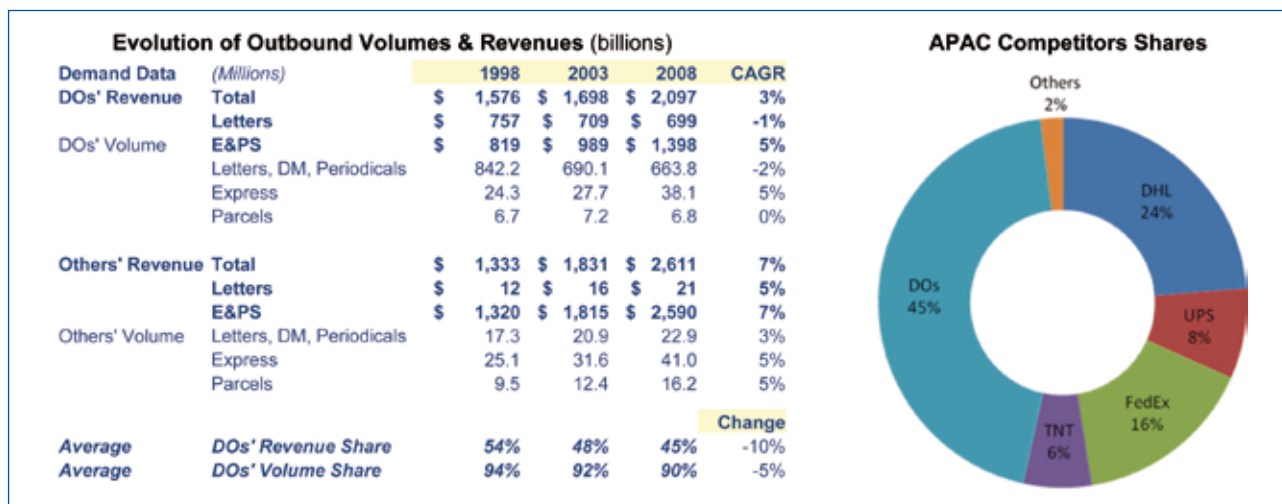
Sources: TNT

As a consequence of this optimism and the increased presence of postal operators in one another's territory, extra-territorial offices of exchange (ETOE) have promoted the practice of direct injection and even full end-to-end delivery. The rates in the Remunerations for the Exchange of International Mail System (REIMS III) do not seem to have slowed competitive intensity in Europe, where many service providers directly inject downstream into the delivering country public or private streams.

### 4.3 Asia Pacific

The Asia Pacific (APAC) market for letters, flats and lower weight packages, ranging in service levels from deferred to expedited, reaches close to \$5 billion. Figure 15 presents the distribution and development of that market.

Figure 15 Asia Pacific International Outbound Light-Weight Market



Sources: Adrenale's Master Database for the 40 countries analyzed, UPU, IPC, Boeing and Colography



For over a decade, the international direct mail industry, particularly U.S., European and Canadian mailers, has been taking advantage of competitive printing, customization, and letter-shopping efficiencies and prices on large volume mailings out of certain Asia Pacific countries. These are posted regionally, multi-nationally, and inter-continentially, reliably and at favorable postal rates through aggressive DOs in the region or foreign operators.

A change in the flow of cross-border bulk direct mail may occur as several DOs in emerging markets enter a transition period and acquire interim Industrialized Country (IC) status, prior to receiving full IC status. This may drive the DOs of these countries to raise prices in order to cover the anticipated higher terminal dues obligations that would correspond to 20g letters.

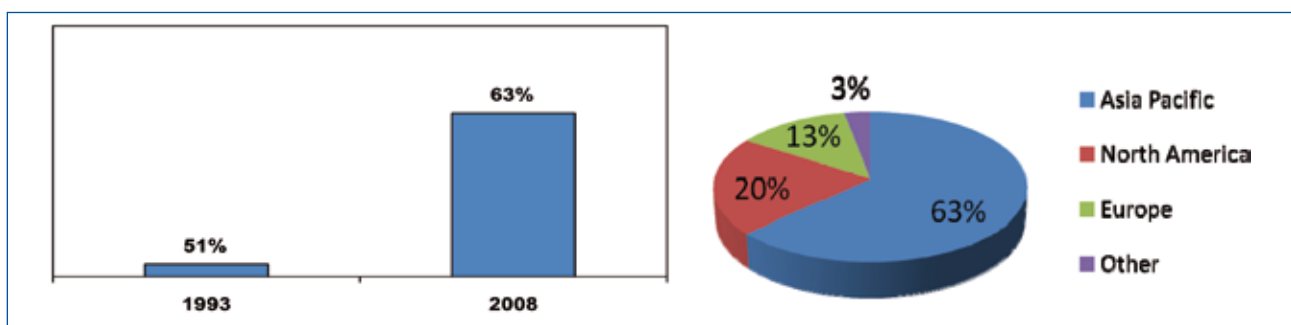
The Mail & Express publication reported in its August 2009 issue that as a result of these changes, and the increased price-sensitivity of businesses, especially advertisers, during the current economic downturn, "mailers are searching for other, replacement mailing points with DC status that can offer lower rates, particularly for bulk light-weight advertising letters, and be fully trusted to ensure that direct and periodicals mail is delivered in full to a broad range of destination countries." Another option available to increasingly price-sensitive mailers is to use alternative delivery systems which either have direct-entry and downstream access wherewithal or have bilateral agreements in place enabling their customers to reduce mailing costs while maintaining the sought-after quality of service.

A development likely to rapidly unfold in Asia Pacific will be alternative delivery systems or ADS. Delivery of cross

border mail through non-postal channels has become relatively commonplace in Europe, and it is expected to become more sophisticated and reliable out of APAC in the future. Larger postal consolidators are actively working to make this happen in an efficient and reliable manner. A lot will depend on the quality of relationships established with individual members of any delivery network. Trust and efficiency will need to be fine tuned and built up over an extended period of time. According to the Post & Parcel publication, Deutsche Post DHL Global Mail is the leading postal consolidator in the Asia Pacific region right now. They are vocal advocates of what they call "the intelligent channeling" of mail internationally. Swiss Post is also making solid efforts in this region. Direct Link (owned by Swedish Post) has in the past been a significant consolidator, but is seen to be scaling down somewhat in the region. The former Spring venture in the APAC region is now wholly owned by Singapore Post who is now completely focused on that region. SingPost's former partners in TNT and RML Response Services now own 100% of the Spring global partnership in cross-border mail, which combines the expertise, systems, networks and products of TNT and Royal Mail.

The other important dynamic in Asia Pacific is related to the growth of exports out of the region. For APAC DOs, international express mail has been an engine of growth both in volume and revenue. Figure 16 shows that APAC EMS has increased its share of global cross-border express mail. The growth of exports and outbound shipping has also attracted other market players -- like integrators (e.g., FedEx, UPS), foreign posts (e.g., DHL, TNT), forwarders, 3rd party logisticians, etc. -- who have flocked to the region and rapidly expanded their networks and footprints in the region.

Figure 16 Asia Pacific Postal EMS in Proportion to Global EMS Traffic

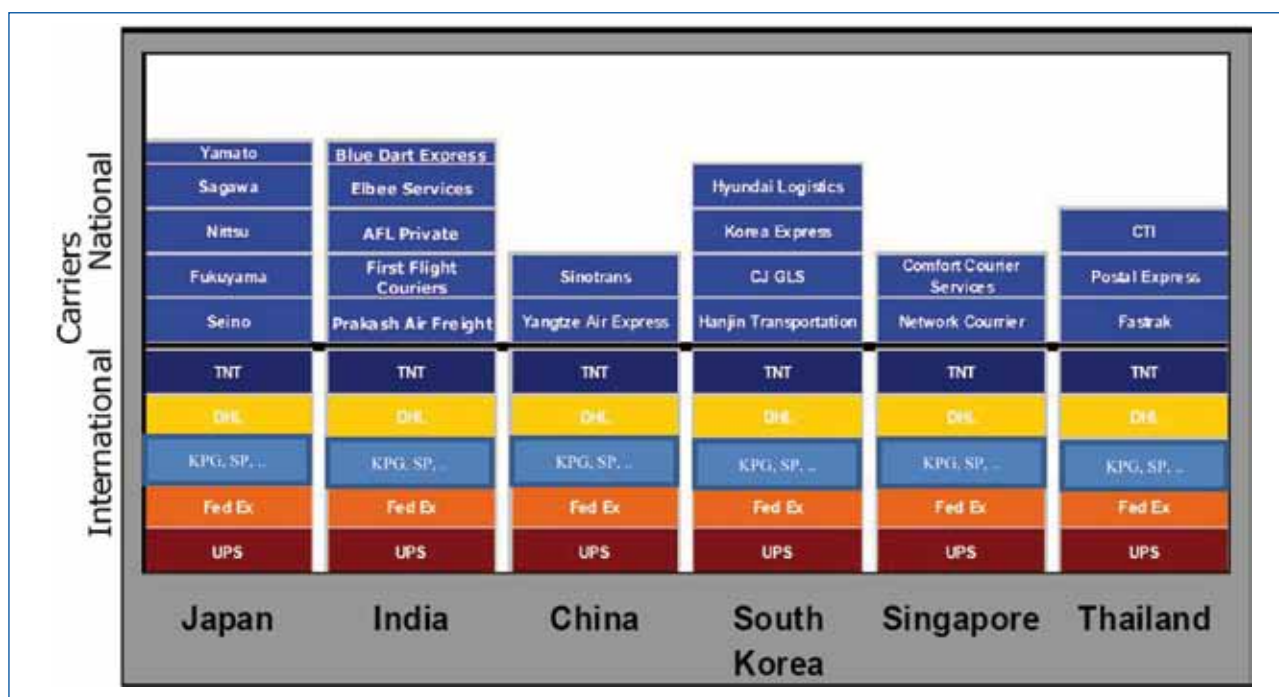


Sources: UPU

The EMS traffic of APAC DOs is under threat not only from integrators but also from local and regional players.

Figure 17 shows a few of these market participants in the lucrative light-weight cross-border market.

Figure 17 Example Market Participants in the Asia Pacific Market



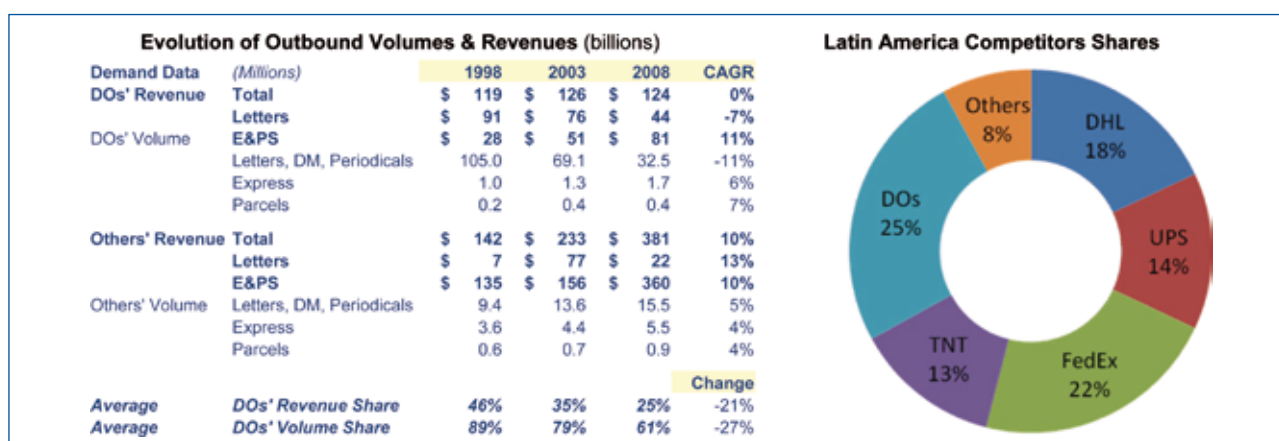
Sources: Adrenale's Analysis based on PostExpo Presentations

#### 4.4 Latin America

Although there are large differences between the countries in the Latin America Region, they have all lost substantial volumes of international mail, blamed mainly on an outdated legal and legislative framework for the sector. An unregulated liberalization process throughout the region has not only fostered a sometimes chaotic competitive environment and a proliferation of operators in main towns and cities, but has also limited the number

of true structural reform programs at DOs. The lack of sector development, restructuring and modernization, and the ignorance of the true nature of demand has also thwarted demand and held the entire market back. Customers feel that their needs are not understood or ignored, and that their supply alternatives are limited. These developments are not lost on international postal operators. TNT, for example, is moving rapidly into the region and spending on acquisitions throughout Latin America. Figure 18 shows the distribution of the \$0.5 billion Latin America light-weight cross-border market.

Figure 18 Latin America International Outbound Light-Weight Market



Sources: Adrenale's Master Database for the 40 countries analyzed, UPU, IPC, Boeing and Colography

Our analysis confirms the extensive UPU and World Bank research into the development of the postal sector in Latin America: the laissez-faire, unregulated competition has had a destructive effect on the demand for domestic and international postal services.

The UPU publication<sup>7</sup> "Postal Economics in Developing Countries" noted that DOs and their governments are trying to facilitate regional and international trade through postal networks. Brazil, for example, implemented a simplified export procedure for commercial items valued at less than 10,000 USD. Several government agencies including the Brazilian Communications Ministry and Correios, the Brazilian Postal and Telegraphs Enterprise, cooperated to simplify the export process and considerably reduce the associated paperwork. At the turn of the century, small and medium enterprises (SMEs) accounted for less than 2.3% of Correios is still declining, reflecting the fact that despite the opportunity, the latent demand and postal wherewithal, obstacles to growth remain.

#### 4.5 Africa, Arabic Countries and Eastern Europe

Like Latin America, the development of the African, Arabic Countries and Eastern European markets has been somewhat erratic. The designated national postal operators and their owner governments have had an important role in growing and often curtailing the postal sector. In many of the countries in the region, the low volume of domestic mail has increased the proportion and importance of international mail. Here, the growth areas of advertising and package mail are at the bottom of the escalating S curve. That international traffic has the opportunity to rapidly go up the exponential-growth part of the curve if the DOs can implement successful reforms with the help of the UPU, the World Bank, and other helping agencies.

The International Bureau of the UPU highlights several trends that are relevant in emerging and developing countries:

- Economic development and postal traffic are not highly correlated, particularly in countries that have enjoyed a rapid GDP and trade growth. Emerging economies, especially in the Asia Pacific region have outperformed industrialized nations for over a decade now. Yet the growth rate of the postal market has been much slower than that of the overall economy, as the postal business is more sensitive to tertiary and service sectors. When GDP grows due to primary and even secondary sector growths, such as manufacturing, agriculture or materials, postal volumes tend to lag in terms of growth.

- Structural constraints, such as forcing recipients to pick-up their mail at a post office and charging for the privilege, have prevented the development of postal volumes, particularly in the growth areas of direct mail and on-line ordered package delivery. For example, in sub-Saharan Africa (SSA), the practice of delivering to post office boxes and charging customers for the renting and inconvenience thereof, has curtailed demand. For packages, the hurdles are even greater with customs clearance and terminal holds that are so ominous that consumers prefer not to pick up their shipments. Unfortunately, the World Bank -Global Information and Communications Technologies (GICT) Department estimates that the financial situation at incumbent postal operators in developing and transition countries is quite dire. Three-quarters of African designated postal operators report a negative net financial position.
- Competition has flourished through private messengers and couriers unburdened by infrastructural and employment constraints, license fees and access charges for universal service obligations, despite considerably higher prices. IB Research showed that in several developing countries, particularly in Africa, competing service providers charge customers as much as 7.5 times as much as the DOs.

In Arabic countries, the growth of Aramex in recent years, shows how even local and regional service providers are taking share away from DOs. The express and package group has reached the \$0.5 billion revenue mark and continues to grow its profits in 2009 despite the economic downturn. The consistent double-digit increase in net income is a testament to the resilience and flexibility of the company's asset-light business model. It also highlights the opportunities that could be available to an operator that innovatively exceeds customer needs.

In Eastern Europe, the growth in postal traffic experienced in the 1990s as several countries began preparing for entry into the European Union (EU) and others were reaping the benefits of economic growth, attracted the attention of new and existing postal market participants. The prognosis at the time was that most of the Eastern European countries, particularly the newer EU members, were entering the "take-off or double-digit growth" stage of their postal development "S" curve, especially when it comes to direct mail and package services. The general consensus was that the per-capita volumes of newer 10 EU countries would over time reach that of the long-established 15 EU countries.

The potential of substantial eastern European growth encouraged integrators, couriers, and foreign DOs to

<sup>7</sup> Postal Economics in Developing Countries: Posts, Infrastructure of the 21st Century – Book written by José Anson (Economist, International Bureau, UPU) and Joëlle Toledano (ARCEP's Commissioner, Chair of the Postal Economics Project Group, Professor of Economics), based on extensive research in Latin America, Africa, and Asia

<sup>8</sup> Postal Economics in Developing Countries: Posts, Infrastructure of the 21st Century.

acquire, invest, joint venture or strategically ally with local mail, package and logistics service providers in order to rapidly enter these emerging markets and quickly benefit from the anticipated growth. The assaults came from the Nordic posts (e.g., Itella, Posten), as well as the central and southern European operators (e.g., TNT, LaPoste-DPD, DPWN-DHL, Austria Post, Swiss Post), and was accompanied by a somewhat swift domestic market opening and postal liberalization process. As a result, the eastern European DOs have, in the past decade, experienced a relatively fast decline in their cross-border traffic.

The other interesting development in these emerging markets is the extent of the positive effect that the internet has had on the domestic and cross-border mail and parcels markets. Electronic communication and web social networks have turned out to be complements rather than substitutes for paper communications and merchandizing. Yet, despite the considerable prospects for expansion, it is evident that DOs have lost substantial volumes and market share (Figure 19).

It is important to note that the countries selected for analysis are among the better performing ones in the three

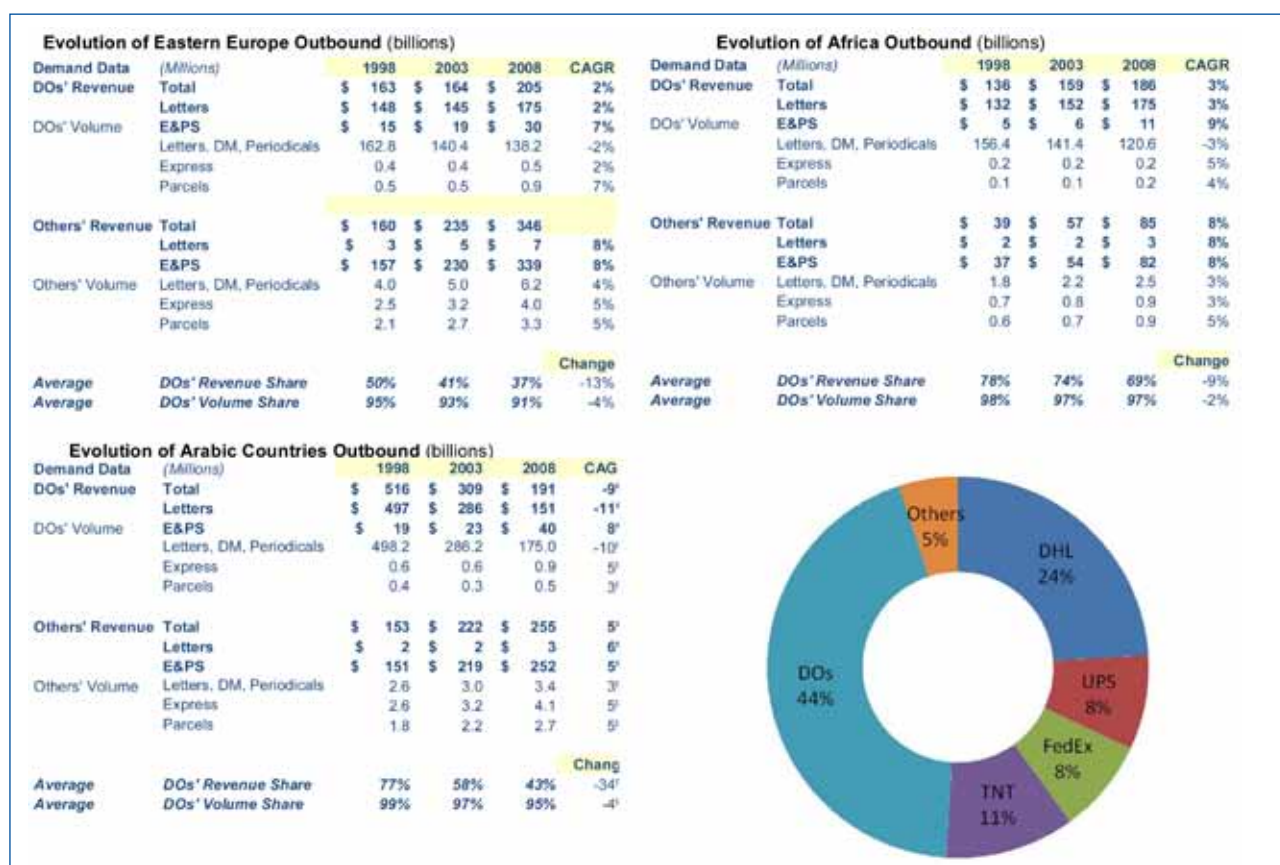
regions. Consequently, the decline in volume experienced by the designated national operators represented in the tables above is not as severe as other countries, such as many DCs in sub-Saharan Africa.

In most of the countries in these regions, a larger proportion of the traffic is generated by consumers, particularly as they go up the affluence ladder, head families, and contribute to economic activity. Consequently, indicators such as number of Internet connections, mobile telephone subscribers, number of households, and even GDP and trade have a greater positive influence on cross-border mail and shipping products than in more advanced postal nations.

#### 4.6 Recent Market Development

The IB-UPU has recently conducted a series of comprehensive surveys that encompassed not only postal designated operators but also other major private carriers. In the second survey, whose results were just published, the recovery in cross-border packages volumes seems relatively rapid.

Figure 19 East Europe, Africa and Arabic Countries International Outbound Light-Weight Market

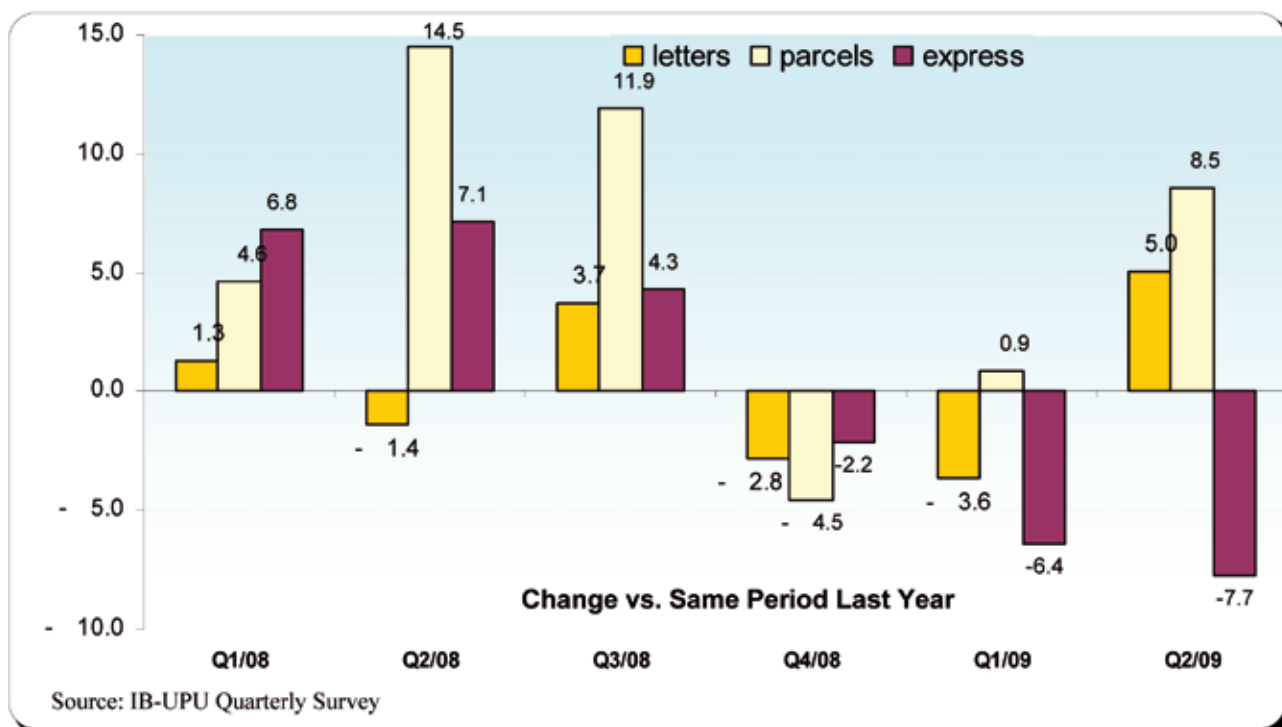


Sources: Adrenale's Master Database for the 40 countries analyzed, UPU, IPC, Boeing and Colography

Figure 20 shows that international parcels volumes have picked up again in Q1 and Q2 2009, while express pur-

sued its decline. As for letters, they have followed a more erratic evolution over the six quarters under study.

Figure 20 The Recent Evolution of Volumes at the Principal Participants in the Marketplace<sup>9</sup>



<sup>9</sup> These figures represent the international service (dispatch) and were obtained from responses to surveys of market participants that represent 45%, 13% and 56% respectively of the total volumes of the cross-border letter-post, parcels and express mail market segments (including two private operators). Due to the low representativity of the sample for international parcels, these figures must be taken with some caution and will be further updated and submitted to data completion in forthcoming IB-UPU quarterly surveys.



## 5. Pricing

As a result of the numerous and lengthy economic downturn periods since 2001, international mailers have become ultra-sensitive to any significant increases in their costs. Businesses everywhere are under ever increasing pressures to keep marketing, advertising and customer acquisition costs down as low as feasible. This is all the more important as new media alternatives, such as internet promotion, web banners, emails, and search engine ads, offer many low-cost options for marketers.

The average prices of cross-border postal, package and express services have remained relatively stable over the decade 1998-2008, increasing by a compound annual nominal growth rate (CAGR) of 2.4% for international letter-post corresponding to a 1.8% real price decrease for the mail of designated operators – after taking into account inflation – pointing to an increasingly competitive market. As for the international E&PS market, non-designated operators have faced a nominal CAGR of 2.0% in their segment, which correspond to a -2.2% real decline in the price level, which could be either interpreted as a sign of a cut-throat express and parcels market, or an accelerated share shift from the high-end premium services to lower-end standard services and from the heavier- to the lighter-weight segments. It can be noticed that the average prices of designated operators relative to non-designated operators has remained rather stable over the period with a similar relative price in the international letter-post (from a 1.02 ratio in 1998 to a 1.00 in 2008) and almost twice the average price difference in E&PS for non-designated (from 1.82 ratio in 1998 to a 1.77 ratio in 2008).

Furthermore, because the volume of advertising mail has surpassed that of transactional letters and because the postal rate is the single biggest cost in cross-border direct mail, businesses are becoming increasingly vocal about their dissatisfaction with cross-border letter mail prices.

### 5.1 Terminal Dues Developments

A pricing question that is often raised relates to the importance of Terminal Dues (TDs) as a cost element in setting international prices for letters and small packets. For parcels the inward land rates are applicable. Other factors that influence pricing levels will also be analyzed in the section.

The purpose of the UPU terminal dues system is to compensate the destination country for the cost incurred for the handling, transport and delivery of letter-post items from abroad. Since its introduction by the 1969 Tokyo Congress as a simple system for compensating imbalances in mail exchanges, the system has undergone significant improvements, towards covering the costs of the individual flows.

Prior to the turn of the century, the system of average costing and differentiated rates applied, enabled several price arbitraging schemes that allowed intermediaries, competing carriers and other traditionally national postal operators to prosper considerably by offering cross-border services, such as direct injection, re-mailing and hybrid drop-shipping. These and other by-pass methods took advantage of rate de-averaging and pricing loopholes along certain origin-destination routes.

Since the Beijing Congress of 1999, the stated goal of the UPU has been to move towards country-specific terminal dues systems that are based on the destination country posts' costs. The Bucharest and later the Geneva Congresses supported the move to a more equitable terminal dues system among IC countries while taking into special consideration the interests of developing countries, which need assistance and time to develop the proper cost-accounting systems, optimized operations, and postage pricing in order to reach the ultimate goal of country specific cost-based rates. A Quality of Service Fund has been established that draws on a percentage of the terminal dues payments. The fund may be used by developing countries to improve their international mail service.

It should also be noted that there are some adjustments to the system, such as the bulk mail rate, and the linking of the payments that countries make to one another to their quality of service, based on quality performance results measured by an independent monitoring system. Also, DOs may make available to other DOs the rates and terms offered in domestic services on conditions identical to those proposed to customers and intermediaries. These are referred to as the "UPU Direct Access" conditions and are described in both the UPU Convention and the Letter Post Regulations, which to-date are only mandated to ICs.

Some of the acknowledged strengths and weaknesses of the current TD system (2008 World Round Table Document) include:

- **Strengths**
  - Gradual movement to better cost recovery, while minimizing market impacts.
  - Simplicity - in terms of data gathering and terminal dues rates calculations.
  - Quality- oriented through the incentives/penalty quality of service scheme.
  - Straightforward transitional arrangements to allow transition countries to prepare for membership in the target system.
- **Weaknesses**
  - Low level of cost recovery in the target system.
  - Application of a cost recovery percentage based on estimates due to lack of accurate cost data, particularly at a real country-specific level.

- Low representativity of domestic tariffs by terminal dues rates calculated using the 20 g methodology. Studies have shown that this rate only represents about 60% of the world flow volume.
- The application of maximum and minimum terminal dues rates, in calculating the per kg and per item rates, may limit the role of domestic tariffs in the terminal dues rates calculation.
- The more rates are calculated based on maximum and minimum values the less these rates reflect the country-specific costs of distribution.
- In the transition system a constant rate was provided for the entire cycle (1.491 per kg and 0.147 per item or 3.727 SDR per kg flat rate). This does not seem to have encouraged transition countries to join the target system.

Analysis of the same 2008 Round Table document also reveals a number of opportunities and threats:

#### • **Opportunities**

- Render the system more country-specific, based on domestic costs and/or tariffs converted into TD rates, with the application of a sound cost-to-tariffs ratio. The system should allow for the gradual transition of countries to the target terminal dues system by 2017.
- Many countries are mechanizing their streams and basing their domestic letter pricing system on shapes (formats) (e.g. letters, flats, packets), degree of preparation (e.g., pre-sort, pre-automation, pre-barcoding), service level (e.g., speed, tracking, special handling) and downstream access depth. There may be an opportunity to adjust the TD system to these developments.

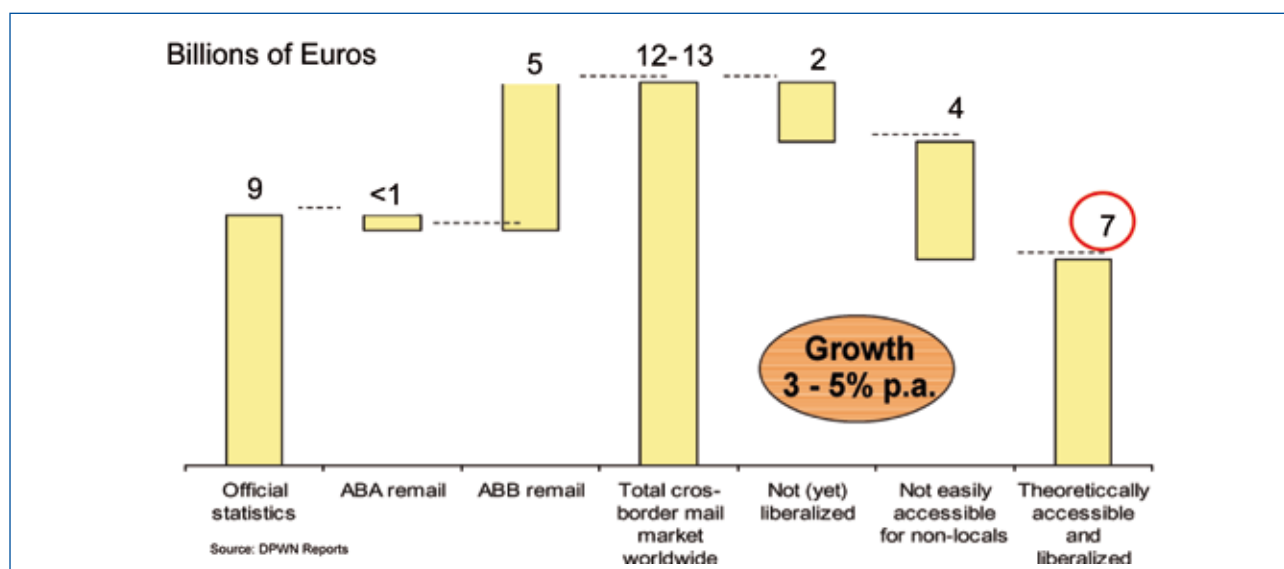
#### • **Threats**

- If the international letter volume carried by DOs continues to decline, the TD income that countries,

particularly DCs, receive is likely to decline further. Moreover, as the share of correspondence and transactions declines, the proportion of lighter-weight 10g to 100g letters and cards to total letter mail may continue to drop.

- As with any system that strives to remain simple while attempting to regulate 214 postal operators in as many UPU member countries and territories, and a product line that ranges in shape from letters to flats and small packets; in content from correspondence to transactions to printed matter and direct mail; in weight from 10 grams to 2 kilograms, and in service from regular to deferred to priority and expedited handling, distortions and arbitrage opportunities tend to arise and affect the behavior of customers, intermediaries, carriers and others in the value chain.
- The phenomenon of “Extra-Territorial Offices of Exchange” (ETOE), in which the designated operator from one country establishes a mail exchange office in another country and competes with the host country’s designated operator. As of 2008, governmental entities of countries must authorize the establishment of such offices, and must declare that the DO will accept or refuse mail tendered by such offices. Handling mail outside the UPU TD system represents a threat for the international postal system, especially for the less developed members.
- Despite the considerable progress towards an equitable pricing system and the specific arrangements that discourage the different re-mailing practices, the net effect has been a continued decline in the international volume handled by DOs coupled with a continued increase in that carried to the final destination by competing market participants. Figure 21 illustrates the results of the market analysis that Deutsche-Post/DHL has made as it endeavors to aggressively reposition its DHL-Global Mail Division.

Figure 21 The Addressable Cross-Border Mail Market Exceeds 7 Billion Euros



## 5.2 Terminal Dues and Pricing

Mailing and customer associations, and postal sector publications continually report that one of the more contentious pricing issues confronting mailers using IC posts, and those about to acquire interim IC status, is whether bulk mail delivered to IC countries is subject to bulk mail adjustments on volumes of more than 1,500 items per day or 5,000 items within a two week period.

The Post & Parcel magazine recently reported that “IC countries tend to be quite punctilious about the application of bulk mail rates because they claim their costs of delivering such items are higher than the terminal dues they receive in compensation from the DCs.” The publication also fueled the rumor that “several group 2 DCs are actively lobbying IC countries to exempt them from bulk mail fees during the forthcoming DC to IC transition phase.”

Postal reporters at Mail & Express Review further highlighted that “many mailers currently arrange for their item weights to conform with postal rate breaks in order to secure the most competitive prices, but as alternative delivery systems (ADS) propagate throughout the marketplace, gaming the system would not be necessary under

an ADS regime where heavier weight items are more competitively priced.” An example is the heavier “dimensional packages” used successfully by many clients (e.g., the fundraising industry to acquire new donors). The cost of privately delivering a heavyweight package is almost the same as the cost of delivering a lightweight package, especially where bulk mail penalties are no longer an issue outside the postal system. ADS tend to under-price DOs by an average of 15%, additional discounts are gained through bundling and co-mingling of different streams to various destinations.

Figure 22 illustrates how mail service providers and other postal operators can take advantage of discontinuities between industrialized country TD rates and developing country TD rates, and domestic and international prices. The data represents average rates, since cross-border mail is priced based on several variables such as weight, distance, region, and other factors. The table shows that the TDs level of coverage of the domestic price, particularly at the lower weights of industrialized nations is lower than 55%. (This observation is most consistently supportable based on the data at the 100 gram weight step. At the 20 gram weight step, the coverage is in the 60-70% range, and at the 500 grams and higher weight steps the coverage varies substantially from one country to another.)

Figure 22 Comparisons of TD Rates with DO Prices for Selected Weight Breaks (SDR)

SDRs and Percents		Price		Inbound TD		Inbound		Target System TDs		Price		Outbound TD	
20 grams		Domestic	% of Domestic			TD/item	Rate/item	Rate/kg		International	% of Int'l		
USPS		0.29	66%			0.19	0.16	1.62		0.59	43%		
CPC		0.32	71%			0.22	0.19	1.89		0.78	33%		
La Poste		0.49	59%			0.29	0.25	1.95		0.74	35%		
DPWN		0.48	60%			0.29	0.25	1.95		0.74	35%		
Transition System Rate per Kg		Avg DCs				0.07		3.73		0.35	21%		
100 grams		Domestic	% of Domestic			TD/item	Rate/item	Rate/kg		International	% of Int'l		
USPS		1.27	25%			0.32	0.16	1.62		1.81	22%		
CPC		0.69	54%			0.38	0.19	1.89		2.06	19%		
La Poste		1.17	38%			0.44	0.25	1.95		1.69	23%		
DPWN		1.26	35%			0.44	0.25	1.95		3.91	10%		
Transition System Rate per Kg		Avg DCs				0.37		3.73		0.55	68%		
500 grams		Domestic	% of Domestic			TD/item	Rate/item	Rate/kg		International	% of Int'l		
USPS		3.77	26%			0.97	0.16	1.62		8.67	13%		
CPC		1.62	70%			1.13	0.19	1.89		7.21	16%		
La Poste		2.62	47%			1.22	0.25	1.95		5.73	20%		
DPWN		1.26	97%			1.22	0.25	1.95		3.91	29%		
Transition System Rate per Kg		Avg DCs				1.86		3.73		1.51	123%		
1 kilograms		Domestic	% of Domestic			TD/item	Rate/item	Rate/kg		International	% of Int'l		
USPS (Flat Rate Envelope)		3.77	47%			1.79	0.16	1.62		9.83	21%		
CPC		N/A	N/A			2.08	0.19	1.89		14.33	15%		
La Poste		3.41	65%			2.20	0.25	1.95		8.30	25%		
DPWN		1.91	115%			2.20	0.25	1.95		7.82	27%		
Transition System Rate per Kg		Avg DCs				3.73		3.73		5.03	74%		
Premium 2 Kilogram Packets		Domestic	% of Domestic			TD/item	Rate/item	Rate/kg		International	% of Int'l		
USPS (Flat Rate Envelope)		3.77	90%			3.41	0.16	1.62		9.83	40%		
CPC		15.02	26%			3.97	0.19	1.89		38.87	10%		
La Poste		3.41	122%			4.15	0.25	1.95		12.62	31%		
DPWN		5.99	69%			4.15	0.25	1.95		7.82	50%		
Transition System Rate per Kg		Avg DCs				7.45		3.73		13.10	57%		

Source: Adrenale's Analysis. Note: Outbound TDs % of prices are determined by averaging the inbound TDs of the other countries.



It also shows that in ICs the level of participation of TDs in the setting of international tariffs, especially with lighter letters, is fairly low. This produces a large margin at the posting country; encouraging competing postal operators to offer substantially lower prices and siphon-off considerable cross-border volumes from the DOs. The possibility of accessing various delivery rates in an inbound country further incentivizes re-mailing and direct entry into that country. The different TD/item rates, shown in the table below, illustrate the pricing gap that is being taken advantage of. The 20g TD of 0.29 SDR per item from ICs into, for example Germany's DO, is over 4 times the 0.07 SDR per item from DCs. This large differential further supports the by-passing of the UPU TD system at the lower weight steps.

The comparison between terminal dues and tariffs is made taking into account retail prices. Mailers and service providers tender mail in the growth segments – such as catalogs, dimensional advertising DM, publications and periodicals, media items and packets – to the DOs at discounted tariffs or to other distribution services, and reserve the stagnating segments of lower weight correspondence and transaction letters and cards to DOs, particularly DC operators.

The heavy weight items appear over remunerated in the transition system as a result of the application of the flat rate per kilogram. The distribution of a small packet is more expensive – by an average of 180% and 190% for a 1KG and a 2Kg packet respectively – in a DC than in an IC country.

The declining trend of letter volumes, particularly correspondence and transactions mail in the 20 to 100 gram weight range, and the expectation of growth in the higher weight brackets, as printed matter and packets return to growth as anticipated, may not bode well for developing countries in the future.

The flat rate per kilogram may currently favor DCs with a relatively low terminal dues rate for light weight items into ICs, but as the composition of cross-border letter mail changes, the DCs may wish to reconsider having a slightly higher TD rate for the light-weight items and a lower rate for the heavier items. Eventually, this point may become moot as the country groups transition their TD system into a rate per item and a rate per kilogram system. Groups 1 and 2 DC countries are scheduled to complete the transition process by 2012. Other groups are expected to convert by 2014 and beyond.

### 5.3 Competitive Letter Pricing

Having secured a competitive price advantage in heavier cross-border letters, documents and printed matter, re-mailers and ADS providers are renewing their focus on the lighter-weight segments, particularly in bulk advertising and transaction mail, where they believe that the bulk mail correction mechanism provides them with additional arbitrage opportunities.

As an example, a USPS International Surface Air-Lifted (ISAL), Negotiated Service Agreement (NSA) 1 ounce direct mail letter (less than 20 grams) from the US to Europe would cost about US \$0.70 in bulk. This is equivalent to about a 30% discount off the single-piece first weight-break letter rate. Despite that deep discount, a REIMS country ETOE charges even considerably less (under US \$0.50 per letter) for direct-entry items. The price in developing countries ETOEs is lower still at less than US \$0.15 (or US \$0.25 for high-volume DC ETOEs) per letter.

According to a presentation by Tim Walsh, VP Corporate and Regulatory Affairs, at the mail and messaging technology leader Pitney Bowes, the pricing of the return trip (Europe to US or Canada) may offer mail service providers an even greater incentive to re-direct letters away from the DOs. Comparing the USPS or CPC domestic presort rate of about US \$0.25, for a direct mail letter, to the rates other countries charge to send a similar piece of mail to the US or Canada, the opportunity for by-passing the UPU TD system becomes more evident. It costs about US \$1.67 from the UK, and US \$1.94 from Australia. Of course, any decision by the European Court of Justice (ECJ) on postal Value-Added Tax (VAT) or recycling fee is likely to further raise significant pricing and implementation issues for posts and mailers alike.

### 5.4 Expedited and Package Pricing

For EMS and parcels other rates are applicable. The purpose of these rates is, like TDs, to compensate the destination country for the cost incurred for the handling, transport and delivery of premium or deferred packages.

The rate determination process for express mail is mostly based on bilateral and multilateral agreements between countries, while the process for parcel is based on individual inward land rates by country and level of service, as set by the UPU.

Figure 23 presents some example of rates for domestic, international and parcel land fees for a 2 and a 5 kilogram parcel. It shows that the fees for delivery that a DO charges another range from 10 to 15 SDRs per parcel.

Figure 23 Comparisons of Parcel Land Rates and DO Prices for Packages at Key Weight Breaks

Table A. Comparison of International letters, Parcels and EMS tariffs and rates for a 2Kg item (in SDR)

Designated Operator	2Kg letter TD rate	Parcel land rates			EMS Rates			Tariff paid by a customer in (CH)			% rate to tariff		
		Per item	Per Kg	Total/pc	Per item	Per Kg	Total/pc	Letter	Parcel	EMS	Letter	Parcel	EMS
NA Target Country X	3.4	4.67	1.93	8.53	3.6	2.25	8.1	28.13	28.75	53.75	12%	30%	15%
EU Target Country Y	3.4	8.04	1.49	11.02	-	-	9.41	20.00	26.25	41.25	17%	42%	23%
APAC IC Country Z	3.4	4.61	0.98	6.57	5.35	1.19	7.73	28.13	40.63	78.75	12%	16%	10%
APAC DC Transition	7.45	5.09	1	7.09	-	-	5	28.13	33.13	71.88	26%	21%	7%
E.E. DC Transition	7.45	7.17	1.41	9.99	-	-	9.5	28.13	26.25	41.25	26%	38%	23%

Table B. Comparison of International Parcels and EMS tariffs and rates for a 5Kg item (in SDR)

Designated Operator	Parcel land rates			EMS Rates			CH Client' Tariffs		% Rate to Tariffs	
	Per item	Per kg	Total/pc	Per item	Per kg	Total/pc	Parcel	EMS	Parcel	EMS
NA Target Country X	4.67	1.93	14.3	3.6	2.25	14.9	41.9	95.6	34%	16%
EU Target Country Y	8.04	1.49	15.5	-	-	9.4	34.4	82.5	45%	11%
APAC IC Country Z	4.61	0.98	9.5	5.35	1.19	11.3	63.8	167.5	15%	7%
APAC DC Transition	5.09	1	10.1	-	-	5.0	52.5	147.5	19%	3%
E.E. DC Transition	7.17	1.41	14.2	-	-	9.5	34.4	82.5	41%	12%

Source: Adrenale's Analysis

Interesting conclusions can be drawn from the tabular comparisons:

- The differences between the TD remunerations payable to an IC and a DC country create anomalous distortions, already noted above.
- The low level of participation of the remuneration at destination in the tariffs of the three weight categories show that international tariffs could enable substantial margins, and allow the contractually discounted cross-border prices of integrators and other international service providers to offer very competitive advantages along key, high-volume routes.

In these examples, we included the tariff that a customer would pay, in Switzerland, for these postal products, as indicative of an upper bracket on the cross-border price. At certain weight categories and along certain origin-destination routes, the high inward land rates force the originating DO to either take a loss or charge higher prices for these international parcels, thus driving customers into the arms of the competition.

Moreover, another discontinuity occurs whereby an economy package, with certain characteristics, could cost considerably more than a similar EMS package. This forces DOs to circumvent the UPU system and form multi-lateral alliances based on negotiated agreement. This enables

members of the partnership to deliver a package for one-another at much lower rates, thus charging the customer affordable prices.

Another development, becoming increasingly popular and made possible by these alliances, is the development of flat rate package prices. As an example, the EPG group delivers priority packages throughout Europe for a flat, under 20kg, price of about 7 Euros, which can be lower than the UPU inward land item rate in key European economies.

Another anomaly that customers notice in the pricing of cross border packages is that sending an EMS or premium air package can sometimes cost less than sending the same package with the DO's economy service or surface product.

In summary, terminal dues (TDs) are considered an important cost element in setting international tariffs for letters and small packets. For parcels, the inward land rates are applicable. An analysis of these international access charges shows that their relatively low share in international tariffs for letters and cards produces a somewhat substantial margin at the posting country, encouraging re-mailing and direct injection. As letter volumes decline and DOs raise rates to preserve postage revenues, the

opportunity for by-passing the UPU TD system becomes more evident, favoring multi-lateral alliances based on separate, negotiated agreements among DOs. The heavy weight items appear over remunerated in the transition system as a result of the application of the flat rate per kilogram, making small packets more expensive in DC than in IC countries. Thus, the growth potential of heavier international postal items is penalized by the application of high TD and inward land rates.

## 5.5 Elasticity Analysis

This section provides a precise estimation of price-elasticities, as well as other elasticities, in order to compare price and other effects (macroeconomic, technological and reputational) on the demand for international postal and package services.

### 5.5.1. Log-Linear Dynamic Panel Data Regressions

An advanced method of econometric estimation was used. The Generalized Method of Moment (GMM) is a sophisticated method that provides precise direct estimates of key parameters, including elasticities<sup>10</sup>. It was important to use the more complex analytics because the more basic estimation methods, such as stepwise linear regressions (ordinary least squares), were not properly taking into account several issues related to:

- Serial correlation or the correlation of a variable with itself over successive time intervals. This type of auto-association can be acute when time-lagged variables are used.
- Heteroscedasticity (non homogeneous error terms). In statistics, a sequence of variables is heteroscedastic if the variables have different variances. When using some statistical techniques, such as ordinary least squares (OLS), a number of assumptions are typically made. One of these is that the error term has a constant variance. Heteroscedasticity may in some instances violate this assumption. That is why more robust techniques were used to analyze the data.
- Causality issues and endogenous variables (or internally generated by the process or data) were addressed using advanced analytics and instrument variables.
- Neutralizing time-invariant effects and differentiating between periods. For example, regional and country differences needed to be addressed.
- Possible measurement errors in some of the explanatory variables.
- The variables that were perhaps omitted, or unavailable at the level of precision that is required, were identified and needed to be treated adequately.
- Reliable estimates of the parameters of the demand functions require the use of a large sample while dis-

counting certain regional specifics. 880 data points were used about 10 years (from 1998 to 2008), and 40 countries. Designated national operators were also separated from other competing operators.

It was thus necessary to capitalize on more subtle elements of econometric analysis in order to arrive at more robust conclusions.

### 5.5.2. Identification and Explanation of Dynamic Effects

#### • Pricing

The statistically significant findings with respect to rates are determined by the value of the “own price log-elasticities” which are a measure of the absolute values of the negative coefficients estimated for each price variable. First, an observation: we find it interesting that the price elasticities of international mail are much greater than those that we tend to see when analyzing domestic mail time series. The price log-elasticities<sup>11</sup> and order associated with the three light-weight segments of cross-border letters, express and parcels:  $E_{\text{parcels-others}} < E_{\text{parcels-all}} (0.09) < E_{\text{express-others}} (0.11) < E_{\text{parcels-DOs}} (0.34) < E_{\text{express-all}} (0.43) < E_{\text{letters-all}} (0.58) < E_{\text{letters-DOs}} (0.77) < E_{\text{express-DOs}} (0.90)$  may be perhaps counterintuitive at first glance, but they are quite revealing of some underlying market dynamics:

- In general, cross-border letter mail shows greater price sensitivity than parcels and express (i.e.,  $E$  is closer to 1). This is because of 1) the existence of lower priced alternative physical dispatching channels and a myriad of electronic alternatives; and 2) the composition of the international letter stream is changing away from correspondence mail in favor of direct mail, printed matter, and small packets, which are susceptible to rate hikes, particularly as competing service providers fight for these areas of anticipated growth with special discounts and contractual arrangements.
- The relative inelasticity of standard parcels is probably due to the non existence of good choices or substitutes. Customers feel that their choice is to either use the premium, expensive services, or the letter mail packet product, or not send their merchandise, gifts or samples at all. A slow, unreliable, surface or ocean parcel product, which may arrive at destination weeks later or be held-up in Customs indefinitely, falls below the acceptability threshold. It is also important to note that sometimes standard cross-border parcels can be more expensive than expedited or premium international packages – for certain weight-breaks and origin-destination flows.
- Express price-elasticities generally fall between letters and parcels, with the exception of the EMS service

<sup>10</sup> A panel econometric approach is recommended in the postal econometrics literature for the estimation of elasticities (see for instance Cazals and Florens in “Economie Postale: les Fondements”, edited by Joëlle Toledano (2004)). In this study, the Arellano-Bond estimator was used.

<sup>11</sup> A price elasticity of (0.58) means: a 10% price increase in the postal or package service leads to a 5.8% decrease in the volume or demand.

of DOs. This product has a very high price-elasticity because the customers that use DOs tend to be upgrading from a standard service. Co-operating E&PS providers understand that they enjoy lower price-elasticities compared to DOs because of their higher pricing power. This is evident at many postal counters where FedEx, TNT, UPS or other branded products are offered side-by-side with the Express Mail Service, at considerably higher prices, and their demand continues to grow while EMS stagnates. As further evidence of the pricing power of integrators, an identical expedited service would be offered in their own retail outlets at a considerable price premium over their own global guaranteed express product offered at post offices. The integrators' explanation for that price discrimination is that the characteristics of customers that use DOs are quite different – in composition, size, industry, sender-recipient flow, etc. – than the clients that call for pick-up or do businesses in their branches (e.g., FedEx Office, UPS Store/Mail Box etc.).

- Price-elasticities for letters and express are high, and relatively close for DOs. A plausible explanation for that dynamic is that the differentiation between air-mail letters, priority mail, and express mail may not be well-perceived by DOs' customers, particularly as the ranges of delivery days appears fairly broad and blend into one another. This suggests that postal operators need to bolster the strength of their brand and rationalize and optimize the features to clearly differentiate between products.
- The substantial disparity, in terms of price-elasticities, between express items carried by DOs and those handled by other non-designated operators, is principally due to the considerable difference, between the expedited services, that customers perceive (e.g., service levels, brands, integration vs. multiple handovers, customs and information technology options).
- Cross-price log-elasticities, within the same operator, for different products:  $E_{\text{express-letters(others)}} (-0.16) < E_{\text{express-letters(DOs)}} (0.17)$  demonstrate that for DOs, EMS and standard letters seem to substitute for one another, indicating that premium or priority letters tend to cannibalize the EMS service of DOs, while they appear to complement one another at competing expedited service providers.

#### • **Macro-Economic Factors**

The statistically significant findings with respect to economic indicators are as follows: Export or trade log-elasticities:  $E_{\text{letters-export}} (0.13) < E_{\text{parcels-export}} (0.23) < E_{\text{express-export}} (0.26)$ . Income or GDP log-elasticities: no statistical significance, except for  $E_{\text{express-GDP}} (0.20)$ . These results can be explained by the following market dynamics:

- International exports or trade matter considerably as macroeconomic factors related to the evolution of international light-weighted items. They are the leading indicator of growth for letters, express and parcels.
- The effect of international trade is the strongest for express. Historically, a 10% increase in the value of

exports has generated a close to 3% growth in the volume of express shipments, followed by smaller, yet significant, increases in letters and parcels, in the range of 1% to 2%.

- After neutralizing the effects of regional and country differences over time (a property of a dynamic panel econometric estimation), the gross domestic product turned out to be less of an explanatory factor in the evolution of cross-border post and package services markets. Only when the export variable is not included in the demand equation for express, does the GDP effect become statistically significant. This is because GDP and trade are inter-related, with GDP traditionally growing at about half the rate of trade.

#### • **New Information and Communications Technologies**

In order to measure the impact of electronic substitution on demand for cross-border letters, expedited items and standard parcels, we examined the statistically significant ICT variables: electronic alternatives log-elasticity or  $E_{\text{letters-internet}} (-0.029)$  and e-commerce log-elasticity or  $E_{\text{parcels-internet}} (0.039)$ .

- Contradicting many pronouncements by postal officials, our analysis determined that the effect of electronic diversion on international letter mail was rather weak. A 10% increase in internet connections leads to less than a 0.3% decrease in the volume of international letters. This is due to the changing composition of the letter mail stream, which is becoming predominantly business-sent printed matter and advertising; two content categories that appear to complement electronic alternatives rather than substitute them. It may also be that electronic substitution has occurred already and affected letters, in the last 10 to 15 years, to the point where the type of mail that remains may no longer be that considerably impacted. Furthermore, in emerging economies and developing countries, Internet access is having a positive influence on mail as consumers develop new communication habits that encourage traditional correspondence, and become more affluent thus positively affecting the C&T mail they send and the advertising mail they receive.
- The Internet in general as well as e-commerce and online ordering, in particular, exert a positive impact on the development of parcels, but the effects remains somewhat weak as a 10% increase in internet connections leads to a 0.4% increase in the volume of international packages sent. We believe, however, that this positive influence would be substantially greater if the obstacles (e.g., affordable price, good service standard, customs clearance, confirmation of delivery) to sending standard packages across borders were addressed.
- It is interesting to note that ICT elasticities show that the positive effect of the Internet and e-commerce is stronger than the negative effect of electronic substitution.

### • *The Customers' Experience*

Customer loyalty can be measured statistically by calculating the repeat factor (log-elasticity) from the previous to the current period:  $E_{\text{parcels-repeat}} (0.40) < E_{\text{letters-repeat}} (0.56) < E_{\text{express-repeat}} (0.73)$ . This result suggests that expedited services have a greater customer loyalty and repeat purchase than letters and parcels. This is due to the high correlation of demand with the quality of the service and the higher-value of the content of express items.

Furthermore, expedited services had traditionally flowed from business to business and these clients tend to have longer-term contracts that reward clients that pledge their allegiance to a particular service provider. The strong link between trust and quality of service is all the more evident with parcels, where the lack of reliable, affordable services drives customers to try an available standard package product and vow not to use the service again, following a disappointing experience. This points to the existence of latent demand and a connection between repeat business and product dependability bodes well for the introduction of a reliable, affordable package service by postal operators.

The above elasticities and resulting conclusions, which were determined bases on a statistical analysis of the 1998 to 2008 decade, have probably changed in intensity and direction with the recent 2009 global economic downturn.

## 5.6 The Impact of Price on Demand: Differences by Market Segment and Region

It was evident, from the regression analyses – that were conducted to determine the effect of rates on demand – that the relationship between prices and volumes differs by market segment and region.

### 5.6.1. The Letter Segment

In the letter segment, there are two principal trends that have opposing impacts on market pricing:

- Increasing electronic substitution, economic hardship, and changing customer habits may suggest that the LC/AO volume is likely to continue declining regardless of cross-border pricing.
- The growing share of printed matter, advertising material, and small packets as a percent of total cross-border volume suggests that marketers and mail preparers or consolidators, who have scores of low-cost alternatives (e.g., direct insertion, remailing, ADS delivery) available to them, are very price-sensitive and have developed sophisticated what-if models to select the least expensive postal operator for each specific origin-destination flow and weight category. Of course, value for money is always important, and the service level of the operator has to be beyond reproach.

Interestingly the simple step-wise regression analysis by region shows that for North America and Western Europe the volume of LC/AO mail is not as highly correlated with the cross-border letter price of the DOs with an R-Squared of less than 1 percent.

Regression Statistics	N. America & West Europe		Eastern Europe		Latin America		Asia Pacific		Africa	
R-Square	0.011		0.641		0.904		0.863		0.707	
Price Coefficient	-	20.806	-	62.740	-	25.721	-	202.325	-	64.502
Standard Error	182.087		15.664		2.798		26.844		13.842	
T-Value	-	0.114	-	4.005	-	9.194	-	7.537	-	4.660

<sup>12</sup> R-Squared reports the proportion (0 to 1) of total variation in demand explained by the variable being analyzed, in this case: price; the higher the proportion the greater the relationship. The coefficients estimate how much demand changes, on average, for each unit change in the independent variable of price. They also show the direction (negative or positive) of the association between price and volume. The t-test examines if an individual variable is significant and shows if there is a linear relationship between the variable price and demand.

This does not suggest that price is un-important (see price-elasticities in the previous section). It shows that mailers will continue finding cheaper alternatives and optimizing their processes and targeting to reduce their mail volumes while obtaining better results. The near zero correlation between price and demand, in Western Europe and Africa, confirms that other non-DO market players are siphoning off volume not so much by under-cutting the DOs' prices, but by offering up- and down-stream value-added services. As cross-border letter mail increasingly becomes an advertising and promotion medium, the price-sensitivity of marketers will grow accordingly. Thus, the higher the price, the lower the return-on-investment (ROI) of the mail, and the more diligent businesses will be in finding other options that reduce their up-front investment and improve their profitability, especially in times of economic downturn.

In other regions, the price-demand relationship is more evident – with R-Squared of 0.42 in Arabic countries, 0.64 in Eastern Europe, 0.71 in Africa, 0.86 in Asia Pacific, and 0.92 in a random group of smaller DC countries. This suggests that price increases in these regions will affect demand, or put more pessimistically, cross-border volumes

are expected to continue declining in anticipation of price increases at the DOs in these regions. It is worthwhile to note that stepwise regression by region is not as statistically sound as the above advanced GMM methods, but is used non-the-less to understand directional variations among regions. Although only R-Squared were mentioned, a full table of results is added above, where the coefficients for the price variables and the levels of statistical significance (the t-stat) were included. As a-priori expected the signs of the price coefficients are negative and show an inverse relationship between price and demand.

### **5.6.2. The Expedited and Package Segments**

The demand for lower-weight expedited and parcel services is increasingly related to price, particularly in premium packages. This was evident, in the recent global recession of 2008-2009 when the demand for overnight services declined substantially. Customers realized that these services were just too expensive. They reduced their demand considerably and shifted to lower-priced deferred products, where reliable services were available. Recent pronouncements by integrators and couriers are optimistic about a return to growth of the E&PS segment with the global economic recovery expected in 2010.



## 6. Customer Needs

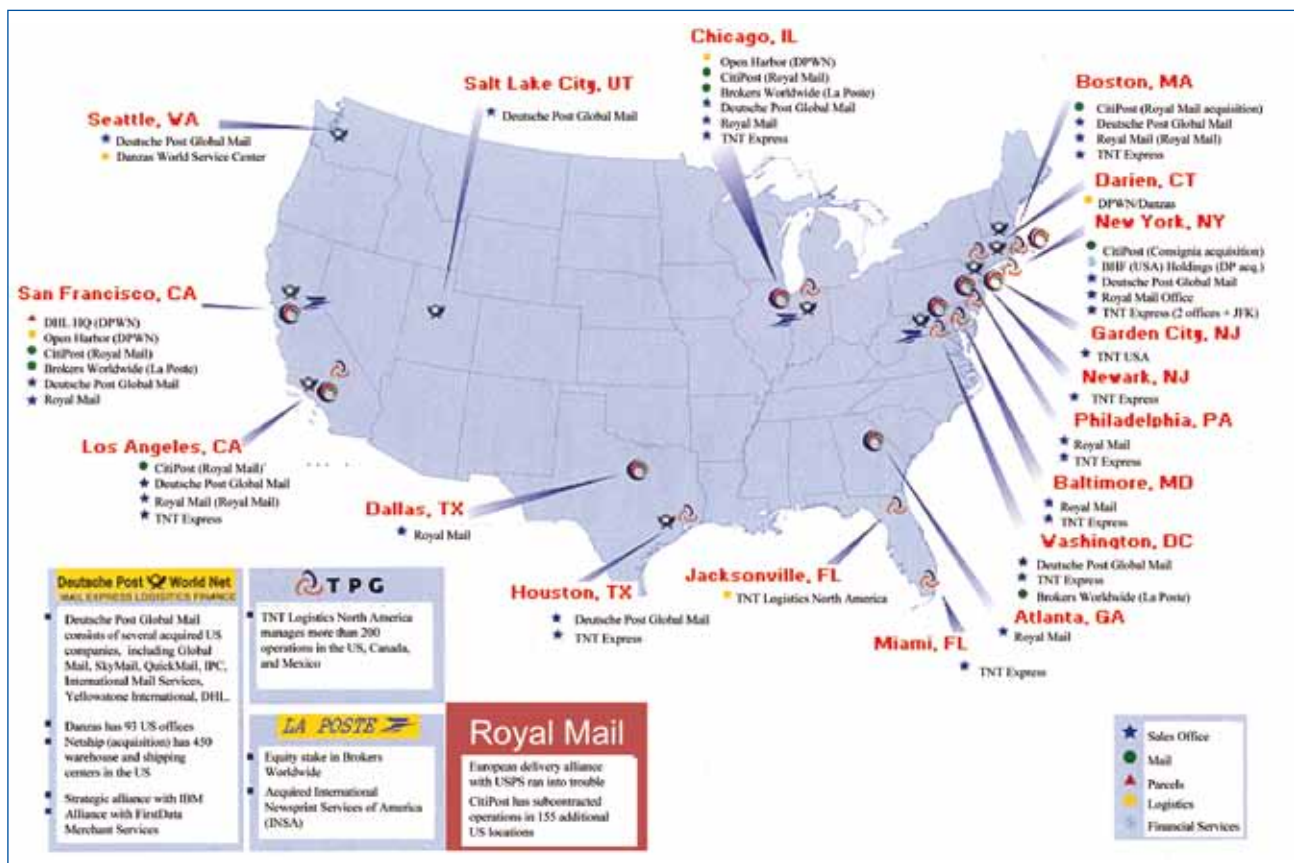
In the 1990s international transportation and delivery was in a different place. Businesses bought their shipping services by mode and weight. If they needed time-sensitive light-weight delivery over long distances, they chose airmail and for higher-value items that need tracking they selected express services. If they needed less-timely transportation, they chose truck or, if the consignment was sufficiently volumetric, rail or ocean depended on the content of the item which dictated, in large measure, the speed of delivery and the selection of mode. In response, transport companies and postal operators provided their services in well-defined silos.

Today, transit time and total supply-chain cost, are the key drivers of customer demand and shipping decisions. For parcels, global supply, manufacturing and distribution networks are calibrated to work with partners that guarantee time-definite or time-specific deliveries, not necessarily the fastest delivery or the cheapest.

Another of the principal trends of the last few years has been that of outsourcing (e.g., billing, printing, distribution); and consolidation. The desire on the part of end-customers to look at full service cross-border mail and packet solutions reflected the wider trend. The market players that have helped businesses be more successful through the use of mail, acting as a trusted partner, and formal outsource supplier, have sustained tremendous profitable growth.

As a consequence, it is becoming clear that much international volume, particularly in industrialized countries, is now going through the hands of intermediaries: presorters, consolidators, wholesalers, etc. As an example of the aggressive assaults that DOs are experiencing in their home markets, figure 24 illustrates the reach of foreign postal operators in the United States.

Figure 24 Posts continue to be aggressive and focus on the key international gateways



Source: Adrenaline's Analysis

The large volume leverage that mail service providers (MSPs) has made it easier for foreign postal operators to enter a particular market without a large upfront investment: they simply sell to the MSPs, who have become the “clients”. Yet, selling to intermediaries is a very price sensitive short term business that removes the hurdles of entering or exiting a market. In the U.S., for example, many new participants have reached remarkable market shares in a short time, with relatively low investments. However, as the DPWN-DHL experience in North America has shown, it is increasingly difficult to achieve positive results as the carriage and delivery of mail is further commoditized and as wholesaling and consolidation provides the operator with volume but little end-customer ownership. Furthermore, security concerns are driving governments to renew their scrutiny of foreign operators in their territories.

## 6.1 End Customers Perspectives

### 6.1.1 The Letter Segment

The prediction that transactions will disappear from the mail stream has not materialized. In fact, in the past five years (2004- 2009) bills and statements mailed to households surpassed expectations, by just declining slightly. During that same period<sup>13</sup>, the proportion of companies offering electronic presentment of bills and statements increased substantially and online banking adoption in the top banks exceeded half of the customer base.

With the growth of broadband penetration and alongside the viewing of electronic bills and statements, speculation has increased that customers will suppress paper bills and statements completely. The evidence counters this ‘perceptual headwind’<sup>14</sup>. In Canada, for example, where 86% of the consumers that can view their online bank statements elect to continue receiving a paper by mail.

Consumer preference for mail and the proliferation of electronic bills and statement presentment systems and models from issuers, postal operators, and third-party suppliers may further fragment the future of electronic presentment and delay adoption. The greatest factors favoring bills and statements in the mail and inhibiting electronic adoption include security, privacy, resistance to change, and technology fears.

The Henley Center anticipates that: “In a world where the consumer’s attention is becoming ever more elusive, the statement may return to being an essential tool, carrying the brand’s values directly under the consumer’s nose.” Furthermore, it also suggests that users of electronic alternatives may eventually tire of the hassle and cost of printing bills and statements they receive electronically, and instead return to the practice of expecting the mail

to arrive with the postal service. This may consequently turn into a problem for businesses since their costs may increase, as users opt to continue having email versions of the bills or statements as well, forcing senders to maintain two parallel systems: paper and electronic.

The decision to use the mail to send financial transactions instead of, or in addition to, other media, implicitly compares the benefits obtained to the expense of producing and mailing the piece. The cost to mail a bill or statement is affected by a range of variables including printing costs, automatic document factory constructs, mail volumes, economies of scale, incentives, business type, geography, etc. Research indicates that consumers’ attitudinal preference for paper is due to the inference that the mailed bill or statement is indicative of the quality of the message sender. Other surveys (PaperCom, EMA) corroborate this finding and show these preferences enable businesses to distinguish their mail pieces and assure their financial transactions will be given the proper attention and importance. In fact, executive interview research, conducted by La Poste, showed the adverse impacts of electronic billing on a corporation’s funds flow could be substantial. France Telecom stated that its research demonstrated that consumers, who are e-billed, pay on average four days later than households receiving paper bills.

Moreover, a recent white paper from the The Radicati Group, sponsored by HP, presents alarming statistics on the escalating cost of enterprise email. The average cost of business email costs has escalated to over US \$435 per user, with much of that cost attributed to the acquisition and management of email storage solutions. Thus, in the electronic world the retention of messages adds expenses that are often omitted when considering the relative advantages of paper transactions.

As technology improves, households will have greater choices about which they employ to send and receive financial information. The postal industry needs to take advantage of consumers’ preference for mail and drive the evolution of bills and statements in order to avert unforeseen outcomes. Today’s environment of high technology-adoption and low paper-suppression can be reinforced in favor of the mail through innovation and added value.

Consumer preference research in North America, Asia Pacific and Europe is convincing. Consumers are pulled to the mailbox by the promise and expectation of finding useful commercial and financial content. They value their financial mail and depend on it to help them with their lives and run their household. Mail brings order to important jobs such as communicating with other members of the household and running the home.

In the area of advertising, research by ComScore Networks, an Internet consumer and research firm, looked at

<sup>12</sup> According to research by The Ascent Group and Data Monitor.

<sup>14</sup> Mailing Industry executives have commented that many public statements on the impact of technology on mail volumes appear to be influenced by a “perceptual headwind” where industry analysts, writers in the press and technology-savvy individuals often assume that their personal experience of greatly diminished letter-writing and frequent use of email should obviously translate into businesses not wanting to use the mail channel to reach them.



the relationship between direct mail and online shopping behavior, and confirmed that:

- More than 8 out of 10 people find it easier to shop online after receiving a catalog;
- Online shoppers who received a direct mail piece were almost twice as likely to buy as those who only received Internet advertising, if the ad mail piece was a catalog, the results were even better; and
- People who received direct mail bought one-and-a-half times more merchandise on retailers' web sites than those who were contacted only via the Internet.

According to opinion research<sup>15</sup> in the U.S. and Europe, consumers remain more favorable towards direct mail versus other channels. Many more consumers prefer to receive direct mail compared to those that want to get email or telemarketing promotions. The Direct Marketing Association identifies other positive indicators of direct mail growth, including return-on-investment (direct mail returns US \$15 in sales for every US \$1 spent), improvements in direct mail response rates through database marketing and increased use of multi-channel marketing, such as the Internet, TV and other media combined with direct mail. Another survey by Target Marketing asked business to identify the method that delivers the strongest ROI for customer acquisition and retention. Some 32% of the respondents identify direct mail as the leader compared to newer e-substitutes (e.g., email: 22%, mobile: 1%, Internet search engine: 6%).

The expectation is that cross-border mail volume will only recover if ad mail leads the demand curve. Although ad-

vertising mail remains tied to the overall level of economic activity, it is also particularly affected by the response of business customers to changes in postage rates, work-share incentives and postal product introductions. Mailers readily shift direct mail volumes among product classes, categories, and competing service providers.

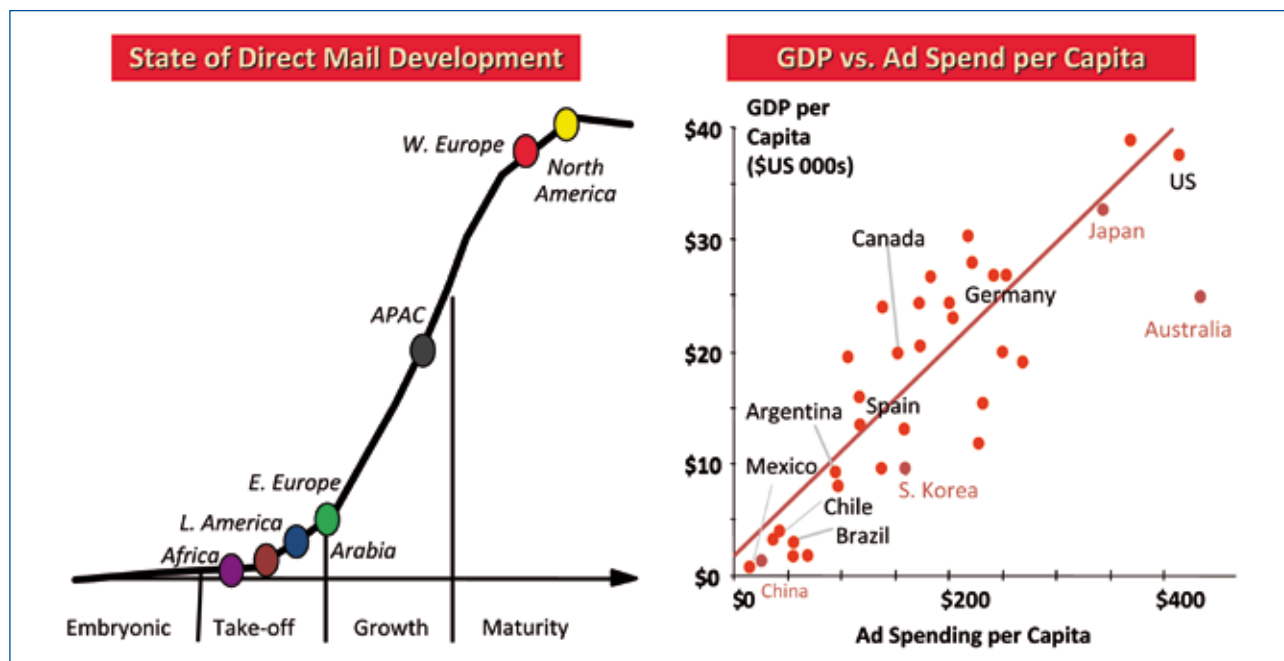
As the proportion of cross-border Ad mail begins to near the half-way mark of the total international mail volumes in many industrialized nations, mail volumes have become even more tied to the outlook for advertising spending and, more specifically, direct marketing.

Analysts note that spending on cross-border direct mail has not declined as dramatically as the doomsayers had projected. The optimistic analysts, on the other hand, note that direct marketing companies have prospered in the recent recession. As an example, they point to Valassis Communications Inc., a leading U.S. DM company. It has increased its stock value by 2000% in 2009, the most of any firm in the S&P 500 top corporations.

Figure 25 illustrates the relationship between economic growth and advertising expenditure. It shows that many regions of the world still have a substantial opportunity to rapidly go up the growth S curve.

Most posts consider advertising mail and the related sales fulfillment as key areas of future growth. In Europe, North America, and Asia Pacific, for example, industry regulators report that direct mail has under-pinned the DOs volume growth for many years. The physical delivery of goods ordered online is also a rapidly growing part of the market.

Figure 25 A Prognosis of a Return to Direct Mail Growth with the Economic Recovery



<sup>12</sup> The studies include: "The Household Mail Preference Study," Pitney Bowes; "Direct Mail in Italy," a Presentation at UPU Customer Day, T. Palmieri, Poste Italiane; "Paper or Electronic? Desired Marketing Reception Channel", K. Elkelä, Finland Post, at Rutgers; "Consumer Attitudes toward Various Media in France", Sofres, Mail Survey; "Consumer Opinion Survey: Direct Mail As A CRM Tool," Peppers and Rogers Group.

### 6.1.2. The Expedited and Package Segments

Packages in the mail have benefited considerably from the Internet and from intelligent tracking technology that enabled the electronic notification of a postal delivery.

Prior to the recessionary downturn, many postal operators had been growing their premium and package volumes with their innovative information value-added services and were benefiting substantially from Internet E-tailing. EBay, alone, now estimates that its users shipped more than 2 billion items annually with DOs. Media mail (e.g., CDs, DVDs) and health shipments (e.g., medicines, prescriptions) are also fueled by Internet-based ordering.

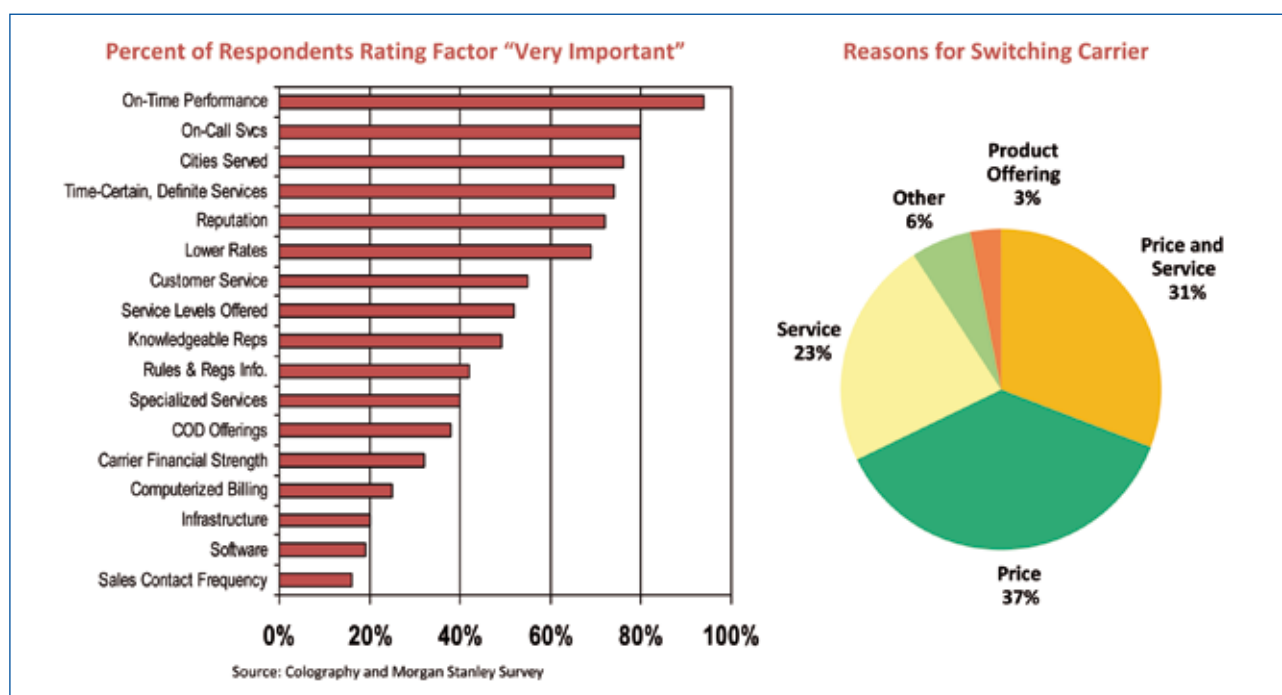
Research into customer wants and needs in the package segments is fairly substantial in industrialized nations. For example, the most recent study on market trends "Delivering Tomorrow - Customer Needs in 2020 and Beyond," was conducted by Global Delphi and published a few weeks ago. It was sponsored by Deutsche Post-DHL. It

provides a number of expert opinions and analyses on the topic of mail and parcels, garnered from 900 international respondents, including CEOs, investment analysts, and respected scholars. The study concludes that the Internet is expected to transform customers' expectations and behaviors all over the world. They will want full individualization, transparency, availability, convenience, and speed at an affordable price.

Other studies, such as Colography's National Surveys of Expedited Cargo and 360 degrees interviews examine how 16 global marketplaces, meet customer needs, how the various service providers differentiate their offerings, and how and why customer switch service providers.

Figure 26 presents a rating for what customers find important in cross-border shipping. It also shows the reasons that about 12% to 14% of customers switch providers every year.

Figure 26 Customer Unmet Needs are Driving Continual Switching



As the power of MSPs increases throughout the value chain, it becomes increasingly difficult to manage directly the originating customer. Small and medium businesses are expected to be the growth areas for postal operators. They usually deliver a higher margin, but have a higher cost of sales and require considerable marketing investments. Large customers provide volume but usually demand lower prices. But, operators take extra care must not to enter into direct competition with the wholesale or MSP channels.

Price and value (i.e., best service for the price) are the two principal differentiators, particularly in the express and

parcel segments. As the growth rates since 2001 indicate, businesses around the world traded down in transit times and price during an uncertain period marked by recession, war, terrorist attacks, corporate scandals, and the severe downturn of industries traditionally dependent on post and parcels (e.g., financial services, retail, publishing, business and consumer services). But they did not necessarily migrate to much slower methods, such as ocean freight despite considerable pricing advantages over air.

The only growth among the modes was in the ground and surface-airlift direct mail and parcel segments, where gains were driven by value-conscious businesses that

shunned premium-priced airfreight in favor of regionalized surface-based inventory models that moved printed matter and goods in smaller, lighter consignments. Customers and their MSPs migrated to best of breed operators that offered express-lite services, characterized by attractive pricing, value-added features like tracking and tracing or delivery confirmations/notifications, guarantees, expedited customs clearance, and stellar reputations for service quality.

Of course, the customer research is backward looking. In recent years, DOs have responded to the challenge of a changed competitive landscape by sharpening their focus, improving their delivery performance, and providing added value to their customers. It is likely that DOs would regain market share in the growth area of B2C light-weight post and parcel items. DOs are beginning to recognize the vital importance of meeting and even exceeding customer needs, particularly in the business-originated segments.

Another consequence of the intensifying competition in cross-border traffic across all modes and service levels is that businesses are less willing to integrate their needs. Bundled services and one-stop shopping concepts are being increasingly resisted by customers when they can get competitive pricing and service coverage through a team of providers.

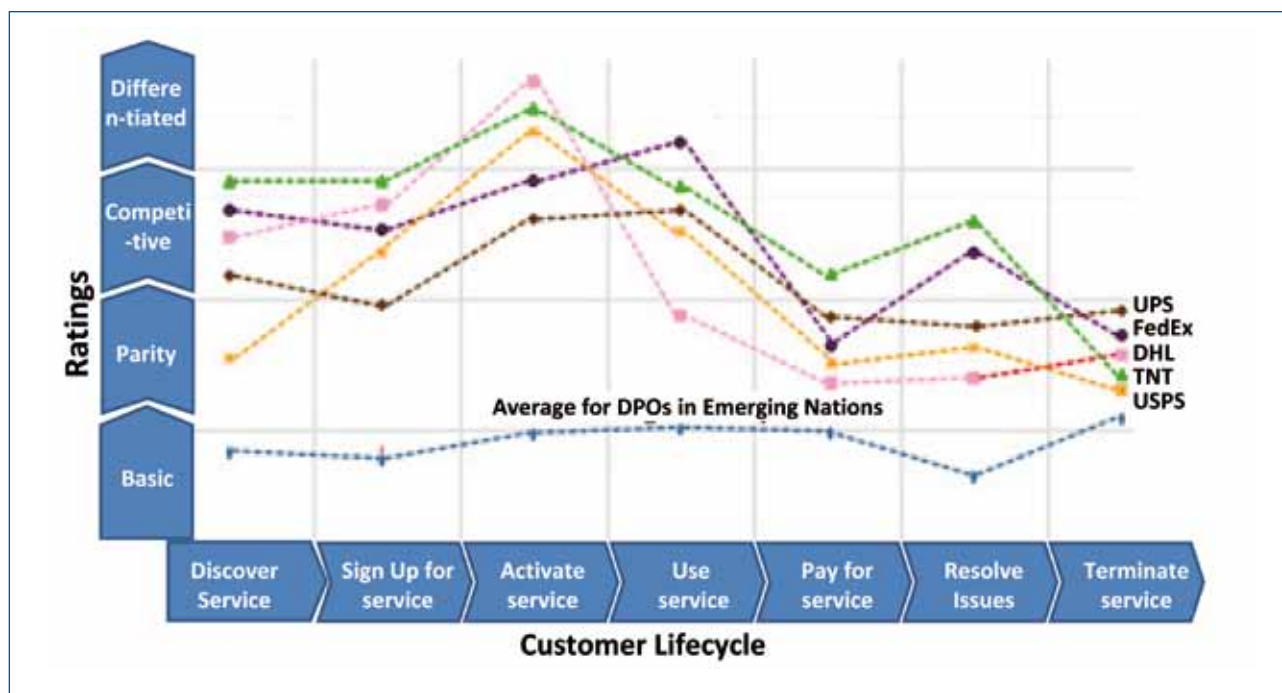
## 6.2 The Customer Experience

Figure 27 presents the results of Accenture research which shows that one of the biggest differentiators between organizations that achieve high performance and their lower performing peers is the emphasis that the high performers put on customer experience and the ability to obtain insights into customers' thinking. From the perspective of profitable growth, posts that have focused on the customer experience have outperformed over the past five years. In recent research involving more than 23 postal and express organizations, players with strong customer experience agendas had two to three times the revenue growth and a strong, positive return on invested capital when compared to traditionalist entities.

When the customer experience is examined across all stages, from the moment that services are discovered to the point at which services are terminated, the research found that for the majority of postal operators, the customer experience showed that many customer needs remained unaddressed and the overall ranking of the customer experience was basic.

Customer experience is the key to increasing and diversifying revenue. Despite the emphasis that postal operators are placing on operational efficiencies, such efficiencies are lacking if they do not address the most critical issue facing them today: profitable revenue growth.

Figure 27 Comparative Customer Centricity at leading Postal and Parcel Operators



Source: Accenture Supply Chain Group. Adapted from Mail & Express Review August 2009

The two primary ways that improving the customer experience drive revenue growth and help postal operators achieve high performance are:

- Retaining a greater share of wallet from existing customers by ensuring that the service is right and captures an increasing market share.
- Meeting unmet customer needs by innovating and launching new products and services focused on key dimensions of the customer experience.

According to the Mail & Express Review Publication, “some of the customer pain points identified include: being unable to create a single account across products or open an account online; the absence of a complete range of products and services (this can often drive customers to seek alternatives); limited payment options for pickup and delivery; inconsistent answers and limited product support across channels (e.g., retail, online, call center).”

Finally, there is the issue of the relevance of postal organizations to Generations X and Y, age groups that have entered the labor force and are acting in their business environment as they would in their personal life, which is characterized by a preference for social networking, text messaging, e-mail and instant communications platforms such as Facebook and Twitter. Postal operators are endeavoring to maintain their credibility as a key communications, shipping, and marketing channel deep into the 21st century. While they had traditionally viewed companies that undertake large mailing campaigns as their principal traditional customers, they are increasingly regarding all stakeholders in the mail-stream and delivery chain as their customers.

### 6.3 Customer Impact on Demand

As the global economic and business environment continue to impact mail, advertising and communication expenditures, businesses are facing more complex decisions on how to best maximize their marketing budgets in an increasingly complex world.

Several research efforts related to direct mail have been released recently:

1) IPC’s strategic perspectives on direct mail point to some interesting developments in the various regional advertising markets. IPC estimates that the share of DM in the global advertising market (estimated at over US \$500 billion, 36% North America, 25% Western Europe, 22% Asia Pacific, 7% Eastern Europe, 6% Latin America) is considerably lower in APAC (low single digits) in comparison to other IPC member countries.

2) The UPU Direct Mail Advisory Board’s (DMAB) survey on direct mail demonstrated that only two-thirds (67%) of designated DOs in developing countries offer an addressed direct mail product, and much fewer (35%) have a delivery point database or mailing lists that can be used for address hygiene (i.e., verification and correction). Another stark difference between DCs and ICs is the availability of discounts or price incentives for correct addressing or presorting and work-sharing.

3) DPWN-DHL has been working in partnership with the Siegfried Vögele Institut (SVI) some time to study direct marketing methods. They believe that cross border Direct Mail will be the next big thing as there are so many small companies that are setting up to consolidate trade between countries.

From these and other studies three key trends have emerged:

- Email – the electronic equivalent of a “push” direct marketing campaign – which involving into new devices and methods, is replacing other mediums for bills, statements, sales reps and promotional Direct Mail.
- Direct mail has been in decline recently, partly because of the economic downturn and partly because internet marketing has been making inroads. Over 93% of surveyed operators expect direct mail to make a comeback (compared to 25% for transactional letters) both because of its relevance and personalization power to drive results, and because spammers continue to destroy a legitimate e-marketing channel. Spam, whose definition has been expanded to include irrelevance and contact saturation, has had a meteoric rise during the 2008-2009 recessions.
- According to a recent IPC flash newsletter, there has been a considerable increase in the number of media, such as:
  - Social Media (online communities including social network profiles (Facebook) and micro-blogging websites (Twitter);
  - Consumer Generated Media including product fan websites, video contests, consumer blog reviews, and viral video (Youtube);
  - Online Video/Radio Websites where users can see movies or TV programs (Hulu, Fancast, Netflix) or listen to the radio (livestream);
  - Search Engine Optimization (SEO) which improve

<sup>16</sup> According to a study by Postini, A Google company, the average spam volume increased by about 1.5% each day in the last few years and has reached 96% of all E-Mail. And, there is evidence that spammers have now built more de-centralized, peer-to-peer botnets that no longer rely on visible control nodes to guide their e-mail campaigns.

the traffic to a site via “natural” search results: showing the immediate section of the website related to the words the internet users typed in. (Google, Bing, Yahoo!, MSN), and Search Engine Marketing (SEM) which promotes websites by increasing their visibility in search engine results;

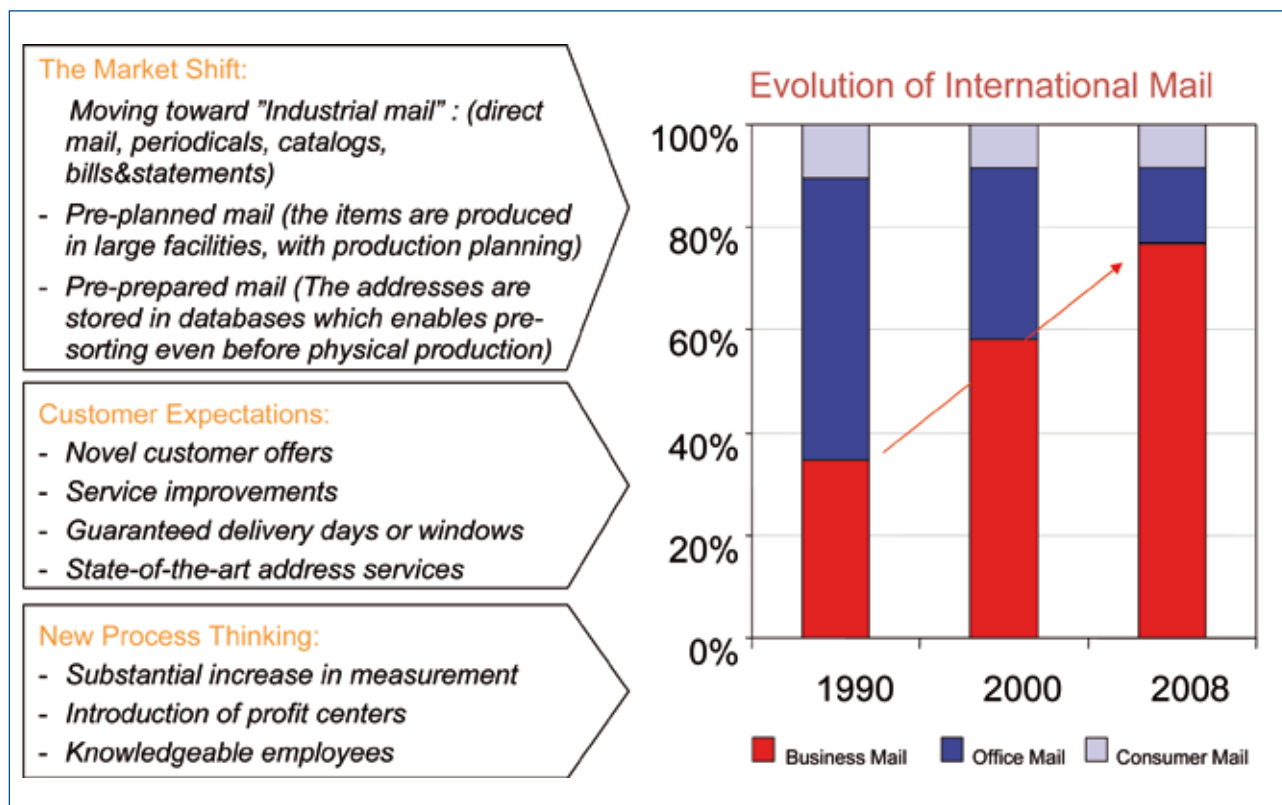
- Mobile Marketing, which is quite popular in APAC, including mobile phone advertising, Internet enabled mobile handsets, SMS calls-to-action;
- Web 2.0, which refers to the trend in web development recognizing how people use the internet and dynamically tailor the site to the visitors’ needs;
- Online Advertising, including banners and homepage takeovers; and

- E-mail Marketing using data driven direct marketing.

The key insights from these market dynamics and considerable “Mail Moment” research<sup>17</sup> in North America, Europe and Asia Pacific are that direct mail solutions need to be kept simple while focusing on the mail as a “present” in addition to a “communication”. This will strengthen the competitive position of DM in light of the onslaught of new media. DM’s focus on “respect, reward, and relevance” is further justified by the mind-set of today’s consumers who constantly reiterate: “don’t interrupt me but entertain me and please me”.

Figure 28 summarizes the recent market developments and their impact on demand.

Figure 28 Customer and Market Developments and their Impact on International Traffic



Source: Adrenale's Analysis

<sup>17</sup> Postal operators periodically conduct consumer mail moment research to study how recipient view the mail and to determine the value of mail in a multi-channel world. The most recent research in North America and Europe showed that consumers continue to look forward to mail they are expecting and value relevant offers that may be included. In the US, 77% prefer to receive correspondence by mail rather than electronically. Postal operators are also capitalizing on the combination of technologies and communications media. The consumers surveyed stated that: "Mail gets attention. No other medium is so personal. No other medium is so relevant. And no other medium can tap into people's individual interests, or needs, like the mail. That makes it welcome, and technology is making it more even more customized and relevant." The USPS, for example, announced that the 'Intelligent Mail' system is now fully operational and will considerably increase the overall value of mail as an exciting and dynamic business communications channel.



Moreover, with the increased attention given to environmental concerns, postal operators need to re-think their approaches, focusing on value rather than volume. In that respect, they have to sell a whole campaign, not just DM items, integrating marketing campaigns and incorporating different media. Media mixing is the new buzzword in the letter mail sector.

The consensus expectation is that these customer dynamics and trends in the mail service provision industry will lead to fundamental changes in the markets, logistics, and work efficiencies related to the postal sector.

Most of the surveys, focus groups and executive interviews, that yielded the research results mentioned above, are stratified to capture the needs of current and larger mailers and shippers. Yet, much of the future growth in cross border mail is likely to come from small and Medium Enterprises (SMEs).

#### **6.4 The Postal Sector as a Facilitator of Global Commerce for SMEs**

A recent UPU document reported that SMEs account for 99% of the world's economic enterprises. There is no denying that SMEs are a key component of any country's economic activity. According to the Organization for Economic Co-operation and Development (OECD)'s Centre for Entrepreneurship, SMEs are significant contributors to the global economy accounting for approximately 50% of local and national GDP, 30% of export, and 10% of FDI." As such, they have rightfully received considerable attention from governments, and national and international postal organizations alike.

A growing concern amongst policymakers is that, for all their success, SMEs are still struggling when it comes to selling their products beyond their national borders, independently of whether the firms were located in developed, developing or least developed countries. Many reasons can explain this situation, among which are the perceived insecurity of trans-border transactions and the difficulty for some companies to gain access to the existing (global) supply chains by lack of financial resources or proper trade infrastructures.

The UPU and its members are endeavoring to demonstrate that the global postal network can bring an innovative response to some of these hindrances. The Postal Network – with its physical, financial, IT, and electronic dimensions – enables the postal sector and all of its actors, to play the role of a true global supply chain specially adapted to the needs of SMEs in all parts of the world.

The difficulties faced by SMEs in international trade have been extensively discussed in studies and symposia by the OECD, the Asia-Pacific Economic Cooperation (APEC), the European Commission, the U.N. Conference on Trade and Development (UNCTAD), and the UPU. Based on the responses of thousands of SMEs worldwide, the studies

identified barriers to increased trade, including an inability to analyze markets, contact potential overseas clients, excessive transportation, delivery and insurance costs, and doubts about the ability to get paid for, and to settle possible disputes about the services or goods they offer.

With its global physical infrastructure and electronic/information network, the postal sector possesses many attributes to enable a successful global supply chain to be at the service of SMEs. One of the core values of the postal network is the high level of importance given to security and trust of its services all along the global supply chain, such as the security of the transport of physical goods (e.g., parcels and small packets), but also of the security of the digital and paper transactions conducted over postal networks. Data is becoming a critical part not only of postal network management and control, but also to track exchange with partners to ensure the conformance of the entire value chain to national and international laws and regulations.

An example of a system supporting SMEs between the two largest trading partners in the world is Canada Post's BorderFree. This project was set up to open the Canadian markets for US online merchants. Noticing that it was very difficult for Canadian shoppers to buy online on US companies websites because of all kinds of hidden costs (taxes, duties and currency exchange variations) adding to the cost displayed online, CPC provides the US companies with a product that allows them to install a "Canadian section" on their website. This section calculates all the costs linked to the shipping of the product to Canada and therefore allows customers to know exactly what they are going to pay when buying online on a US website. Furthermore, the US retailer/e-tailer only has to ship the ordered goods to a US "hub" from where the goods are processed by CPC-Purolator for delivery to the Canadian recipient. This trade-facilitating measure has brought a significant increase in the volume of packages between the US and Canada. From a supply chain perspective, US SMEs that wish to expand their sales in Canada do not need to change anything in their domestic logistical processes.

Another example of a system supporting SMEs is presented by the Kahala Post Group.

KPG studied the market of mail and parcels exchanges between the countries of the group and found out that a segment of this market was somewhat neglected by integrators and other operators, namely the "business customers" that had between 10 and 100 shipments a month. These customers required reliability, pick-up options, guaranteed date-certain delivery as well as item tracking in-transit and proof of delivery. KPG members realized that, a global postal network – which in their case reaches close to 300 million delivery points, linked through some 10 billion origin and destination delivery point pairs, accessible in over 150 thousand retail locations -- is in a great position to provide such a product.



## 6.5 Prognosis for the On-Line Segment

With increasing consumer interest in online shopping, the amount of trade that is conducted electronically has seen extraordinary growth. According to MasterCard's latest Insights Report, "Online Shopping - Patterns, Trends and Future Growth," this growth is poised to further accelerate.

In Asia-Pacific, the growth is expected to increase at an annual rate of over 20%, reaching US\$170 billion by 2011. The focal point of this growth is shifting from the consumers in Japan to new customers in China, India and throughout South-Asia, where the rising population of upper-middle-income urban elites is likely to boost the online shopping markets significantly.

In Europe, the UK is leading the way in e-tail sales according to Mintel. The survey showed that online sales in the UK reached €20 billion (£14bn), compared to €15B in Germany. France topped €7B worth of sales while Italy exceeded €1 B and Spain stood at €1B. The UK has also seen the fastest level of growth. Between 2005 and 2008, online sales soared 75%, a performance matched only by the French market. Sales in Europe are forecast to rocket 200% hitting €60 by 2012 in the UK alone. These developments are a double-edged sword for postal operators where the growth of packages may be accompanied by a decline in traditional mail. For example, the largest German online retailer the Otto Group, and owner of Freemans, Grattan and Oli in the UK, has moved a large portion of its catalog business online but has increased its package shipments considerably. Furthermore, the attacks of foreign posts on the B2C markets of neighboring European countries appear to be intensifying. The recent announcement that Home Delivery Network is going global with TNT is an example of the refocus of operators on consumer-centric packages (e.g., B2C, C2B). The partnership enables HDN's clients, Shop Direct Group, a leading e- retailer, to expand their online shopping services further. HDN already delivers in the UK and will now have the capacity to help its clients reach consumers in more than 200 countries.

In Latin America, e-tail analysts see nothing but growth ahead. Currently there are about 130 million internet users, in an expansive region with 550 million people. While the number is less than that of online users in Asia, Europe or North America, it is growing faster than in other regions. Companies such as MercadoLibre and iBazar, which recently received considerable investments from eBay, are well known for their auction-sale format. Yet, over 90% their users choose fixed-price sales, and more than 80% of the articles purchased are new. This shows that customers, voting with their wallets, rate confidence, predictability and reliability as the highest factors in on-line purchasing. And, as Correios' experience with the Brazilian simplified export procedure attests, the Latin American DOs are not benefiting as much from the online shipping segment as the opportunity indicates. Further-

more, the focus of global market players on emerging markets does not bode well for DOs in the region.

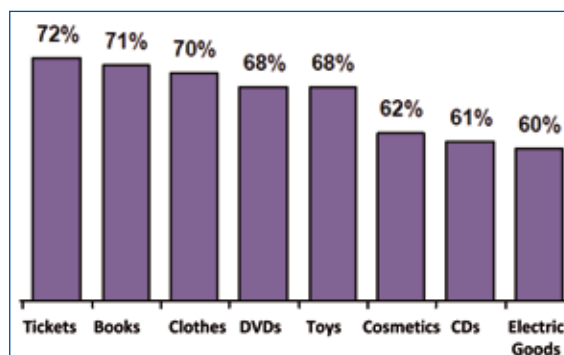
Other reports, which analyze customer behavior in relation to e-commerce, reveal that:

- The vast majority of shoppers plan their purchases and conduct substantial research – including browsing on the internet, the merchant's website, and through suggestions – before spending online.
- Some buy on impulse while shopping online. For those who made opportunistic purchases, they attributed this to the low prices and substantial discounts they found (including shipping rates). Other factors included the availability of unique items available only online and advertisements and promotions.
- A strong relationship exists between the intensity of online shopping and Internet penetration rates, cultural affinities, and income levels.
- The availability of a secure payment facility, price and convenient payment and shipping methods are the top factors affecting the propensity of online shopping.

## 6.6 Return Logistics

The Interactive Advertising Association Online Shoppers Report – which forms part of the ongoing Mediascope studies that look at how people consume media and how they use the internet for content, communication and commerce – illustrates that the top ten products with the highest sales or order conversion rates (figure 29) can readily be sent with postal operators.

Figure 29 Top 10 Online Sales Products with Highest Conversion Rates



Source: The Interactive Advertising Association ([www.eiaa.net](http://www.eiaa.net))

The Forrester report: "Growth Forecast for 2009 Online Retail Sales" predicts that despite the recession, online retail sales will continue to grow, albeit at a slower rate and at the expense of physical stores. Consumers will turn to the Internet for all their shopping needs as it provides a better environment to price-check, ensuring the best bargains at a time when money is tight, along with the convenience and cost-saving elements of being able to shop from home. E-retailing operations will consistently grow in sales, order sizes, conversion rates and more. Web retailing's growing power is due in part to merchants' growing ability to analyze, predict and

react to changes in online shopping behavior across all merchandising categories.

Service providers are betting that the reverse logistics market is another area of growth and opportunity. The return proportion of online purchases averages 25% (35% for online apparels). Thus, an emerging driver of growth in the market place is the need for easy solutions in return processing. There is an increasing need for items that are sold to be returned, recycled, repaired, recalled, etc. The U.S. Postal Service, for example, is focusing on apparel, electronics repairs, recalls (e.g., toys in 2008). One of the highest growth items are shoes (ladies) with a high-return rate. The USPS handles over 50 million household to business returns, taking advantage of its extensive retail network.

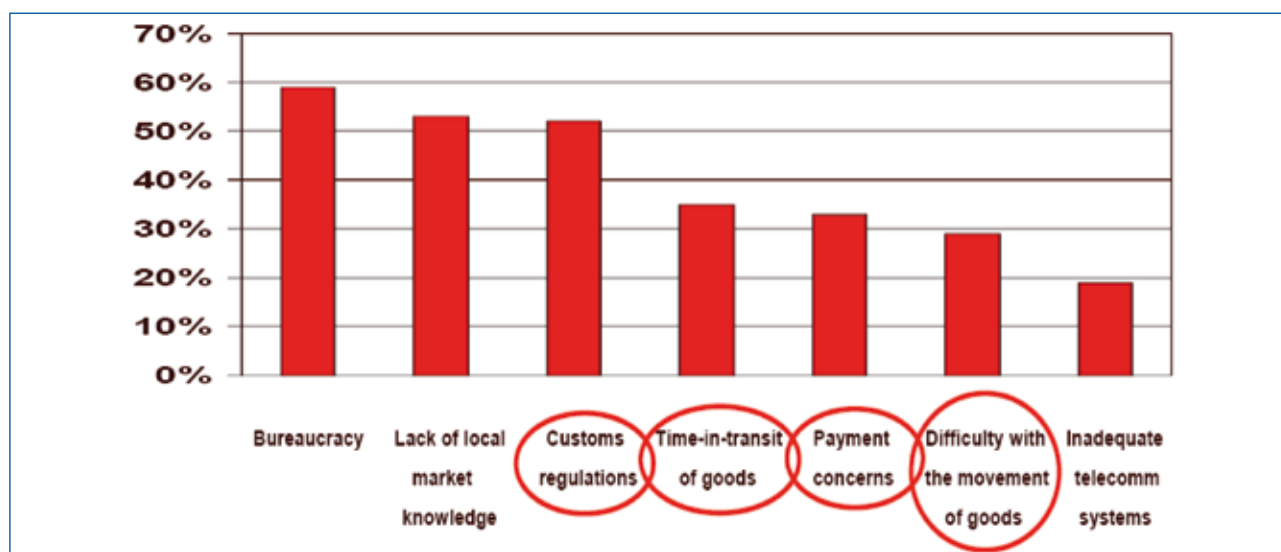
### 6.7 Challenges to Growth

Despite the projections of substantial web retailing growth, many obstacles to cross-border package growth

remain. In fact, a recent study performed by DPWN-DHL, together with the London School of Economics, has revealed that when international trade rebounds in the medium term, shipment volume will not rise as fast as the value of trade. The study “International trade, Express Logistics and Globalization: Part and Parcel of the Solution to Current Economic Challenges” revealed that the outlook for global trade remains strong even as trade remains at best stagnant in the short run due to low availability of credit. However, when credit becomes freely available and trade rebounds, the study suggests that the return of trade will not benefit all countries equally. The study also shows that service providers need to look at ensuring reliability and timeliness, as well as costs. Transport and logistics costs in particular, outweigh tariffs as the greatest barriers to trade by a factor of 9 to 1.

In addition to the shipping price, the principal obstacles to trade include customs clearance and time-transit. A survey – of about 2,000 leaders in some 20,000 companies – about the logistical challenges that business face revealed the results of figure 30.

Figure 30 Customer Survey Responses to the Challenges of Trade



Source: Survey by Colography and UPS

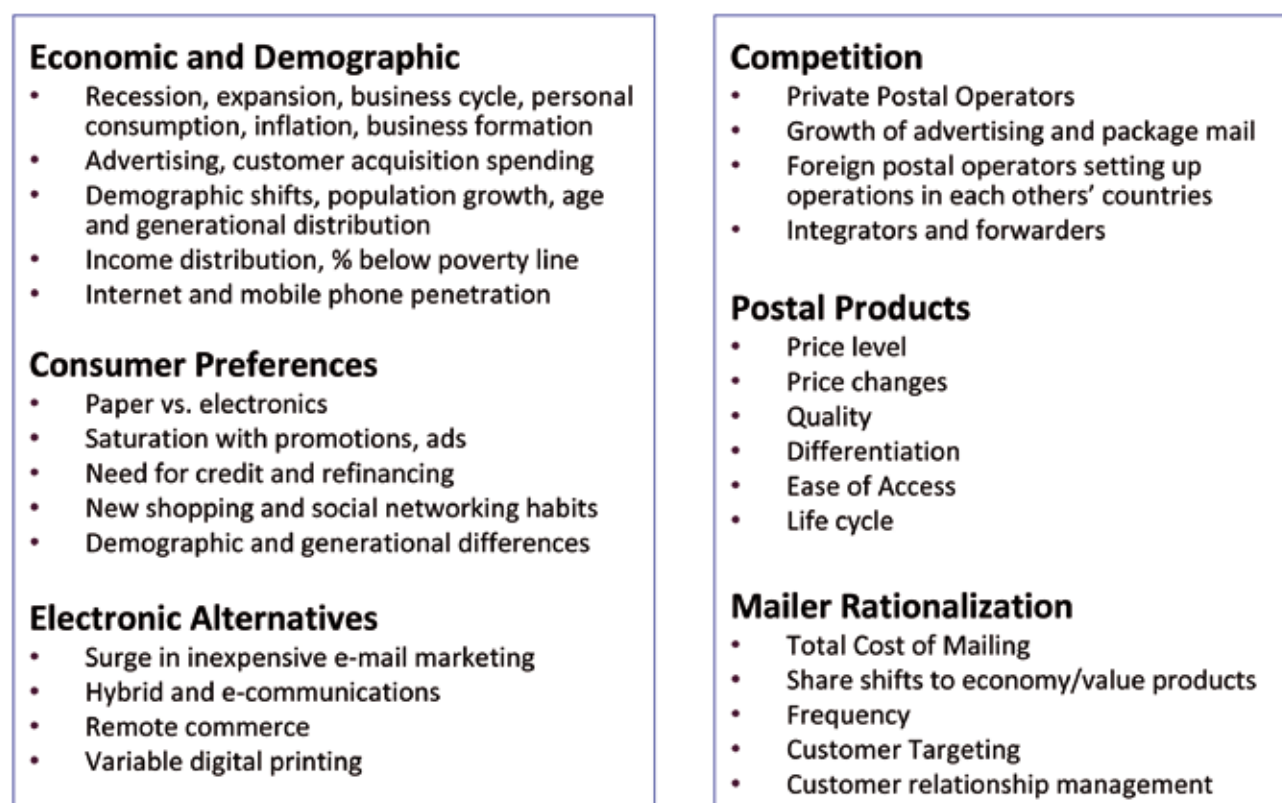
The fact that online shoppers want more choice of shippers and are adept at price shopping may favor postal operators. About 60% of consumers and 70% of business owners would have a more favorable opinion of online services if they could select their delivery company. Close to 15% of consumers and 30% of business owners will not even make a purchase from an online company that does not offer a choice for delivery. Finally, some 15% of customers change delivery providers every year. This used to be in the single-digits, but now technology enables price-service shopping.

### 6.8 Demand Drivers

The financial turmoil that has caused havoc with the global economy has left its mark on the postal sector in 2008 and 2009. Yet the “voice of the customer” highlighted in the analysis above, suggests that postal operators can still return to rapid growth, particularly in advertising mail and in serving the needs of the e-shopping and e-commerce community.

Of the many factors that influence demand for mail and packages, some of which are shown in Figure 31, postal product design is the one that has the potential of affecting all the other factors in favor of the DOs.

Figure 31 Many Factors Influence the Demand for International Mail and Packages



#### 6.8.1. Product Design in the Letter Segment

In the letter mail segment, it is evident that the current UPU cross-border terminal dues system addresses the declining household-to-household correspondence flow better than it deals with the growth area of direct mail.

Thus, an important driver of growth in this segment is to tailor the TD system to the needs of advertisers, who plan their mailings, are able to pre-prepare their letters or catalogs and select dynamically who they send them with, and carefully measure the ROI of each campaign.

Consumer preference is another key driver that needs to be promoted, particularly for correspondence and transaction mail. The UPU and the mailing industry need to work together to publicize the considerable research that shows how much recipients value the mail.

#### 6.8.2. Product Design in the Expedited and Package Segments

The growth in these segments has not benefited postal operators as much as the opportunities would suggest. At a time when the total market volume increased at about 5% annually in the last 10 years, the DOs have grown at less than half that rate.

Express shipments serve the needs of those who want urgent physical shipments. More recently, with the advent of email, it appears the express carriers' document ship-

ping may have suffered along with the posts' own express products. Business reports and academic research, for example, are no longer distributed by express courier or through regular mail since they can be readily attached to emails or made available online for downloading. Sometimes a back-up copy follows via non-urgent regular letter mail streams.

Another development to note here is the impact of the Internet on package volumes. Remote shopping has had a positive effect on the growth of packages destined to and from households. Studies report that, in industrialized countries, households with broadband Internet access send and receive about four times as many packages as households without Internet access. These relationships also reflect the correlation between income and access.

A joint study by Deutsche Post and the London School of Economics<sup>18</sup> estimated that the global E&PS market volume may return to growth of close to 3%, and the average weight of a shipment will continue its long-term decline. The market trend is also toward transport modal 'neutrality'. The emphasis is on time-definite services, whereby cost-conscious consignees are willing to trade down the speed of transit times as long as the shipment arrives at pre-determined intervals.

<sup>18</sup> That is one of the key conclusions in a joint study by Deutsche Post-DHL and the London School of Economics conducted in 2009: "International Trade, Express Logistics and Globalization: Part and Parcel of the Solution to Current Economic Challenges."

These trends toward B2C and C2C&B flows, lower price, lower weight per item, and a preference for slower (but time-definite) ground services, should favor postal operators over integrators and dedicated express carriers that might be perceived as offering premium, more costly services.

Here again, product design is important driver of growth, as evidenced by the rapid growth of the Kahala Group. An affordable, traceable, and reliable, 4 to 7 day international parcel product has a great opportunity to capture the sweet spot of the growth E&PS market. Feature predictability must be a principal component of that product, including the predictability of:

- The price. This could be accomplished through the introduction of flat-rate products, with different size boxes that can be filled without the need for weighing and rating. The 1kg, 2kg, or 5kg packages launched by certain advanced postal operators are examples of such a simplification.
- The service standard. A range of days can be specified for cross-border delivery. For example, a premium 1-week worldwide delivery can be considered, and a deferred parcel (e.g., a 2-weeks global cross-border delivery time) can also be introduced at reduced price for the cost-conscious e-shopper.

- The value-added features, which are increasingly becoming a minimum threshold of customer acceptance, include a minimum level of tracking (e.g., an e-confirmation or e-notification of delivery), and insurance (e.g., money back for loss or damage).
- Customs clearance for both the duties due and the time in transit. This service attribute is not only being requested by customers, it is also being mandated by Customs Authorities. Increasingly, security constraints are driving government agencies to force postal operators to pre-send clearance information.

Furthermore, a link between the movement of the physical package (e.g., payment, labeling, customs documentation, etc.) and the information about it should be provided on the internet sites of the principal e-tailers (e.g., eBay, Amazon, etc.), the postal operators, and the UPU.

Moreover, service improvements in air and surface cargo provide postal operators with the opportunity to build more competitive international deferred services. Customers, forwarders and airlines are increasingly sharing demand/capacity information and reducing unexpected bumping. IT Investments and improved shipment visibility and tracing allow forwarders and carriers to better manage events and reduce variances in delivery time.

## 7. Substitution

Many designated national postal operators have attributed the recent declines in the growth of letters, and often exclusively, to electronic diversion. This was masking other drivers, such as competition from private operators and from foreign posts operating in each other's markets, and postage price increases, particularly in times of economic downturns, that have driven mailers to seek additional cost-avoidance alternatives including: lighter-weight, double-sided paper; outsourcing and destination drop-shipping; shifting mail from priority to economy categories; and using more work-sharing incentives such as pre-automating, pre-sorting or down-stream entry.

Posts need to better understand the different patterns of technology adoption and their impact on mail. In some cases, the new media are complementary to mail. In other cases, the new technologies generate additional demand that would not otherwise have materialized.

New technologies and process innovations constantly appear on the horizon. While they often replace established practices such as the mailing of correspondence and transaction mail, advertising letters, periodicals, and even land-line telephone calls, at other times they complement current methods and even create new growth opportunities that were not possible before. Electronic substitution preoccupies researchers and managers in the postal and mailing industries. A common assumption is that the mere presence of new technology-based alternatives (e.g., email, text messaging, Internet voice/video, Web meeting) must per force cause substitution of the new methods for the traditional physical mail. Now, some observers are pointing to the threat of a next wave of emerging technologies – broadband, wireless Internet, and multi-PC homes. Some even mention innovations totally unrelated to mail, such as recordable DVDs, Internet games, digital photography, web printing, TiVos and iPods.

In fact, there is only one number that matters: the number of transactions performed on the Web that would otherwise have been conducted by mail. Only then do we have real substitution – when we place an order by phone or on the Web that we would otherwise have placed by mail; or if we pay a bill online, instead of doing it by mail; or we agree to receive a statement online replacing its receipt by mail. All the other Internet statistics are irrelevant to assessing substitution.

Our extensive research has uncovered a rich range of dynamics related to the interplay between old and new technologies. In particular, we distinguish the following patterns:

- **Pure substitution** – where the new technology fully displaces the old method. The conjecture that electronic substitution for mail would rapidly follow has been logical, as a wave of new technologies were

emerging and gaining broad acceptance, notably the personal computer, fax, email and the Internet. However, we note that seemingly, the effect of technology to date has had a relatively reduced effect on mail volumes, – mostly in consumer communications, government forms, and business financial transactions and notifications – compared to prior dire predictions. While mail has declined during the recent recessionary period, its resilience has defied numerous prognoses of a severe downturn due to electronic substitution. Another clear example of pure substitution involves government-mandated or sponsored electronic interactions. The prognosis is for a slower e-substitution rate in the future, especially as the advances in computers and communications have already placed the industrialized countries well into the upper reaches of the classical “S” curve of technology adoption for both businesses and households. So, it can be argued that electronic diversion has reached its highest levels and that further substitution is likely to increase less rapidly than it has in the past decade.

- **Complementarity** – this occurs when the new and old media continue to coexist. The pattern is characterized by a declining rate of growth of the old medium and a faster growth rate of the new medium with a net additive effect on total demand. Internet browsing used simultaneously with paper catalogs is a good example of the new and old methods both growing and continuing to coexist. In retail, we observe a rapid growth in online sales as Internet-based remote shopping increases at double-digit growth rates, with a corresponding growth in package volumes. However, the percent share of Internet to retail sales remains in the single-digits. Furthermore, multi channel retailers (bricks & mortar plus online) account for about three quarters of e-tailers. This has changed substantially in the last decade. In 2000, web-only retailers carried out close to half of on-line retail.
- **Creation of additional demand** – where the new medium generates important new growth that adds to the growth of the traditional methods. The typical example here is the substantial mail volume that new economy companies (e.g., Dell, HP, Google, Amazon, EBay) generate to transact and promote their services.
- **Stalling** – where, after a promising start, the new method reaches a limit, stagnates, and subsequently poses little threat to the traditional one. One of the principal streams of person-to-person correspondence is cards (e.g., holiday, greeting, sympathy) , where electronic methods have not succeeded in capturing a large portion of the market after over a decade.

We question whether it is possible that international mail volumes have reached an inflection point from which they will start declining steadily. But, when we look at the Correspondence & Transaction (C&T) applications that

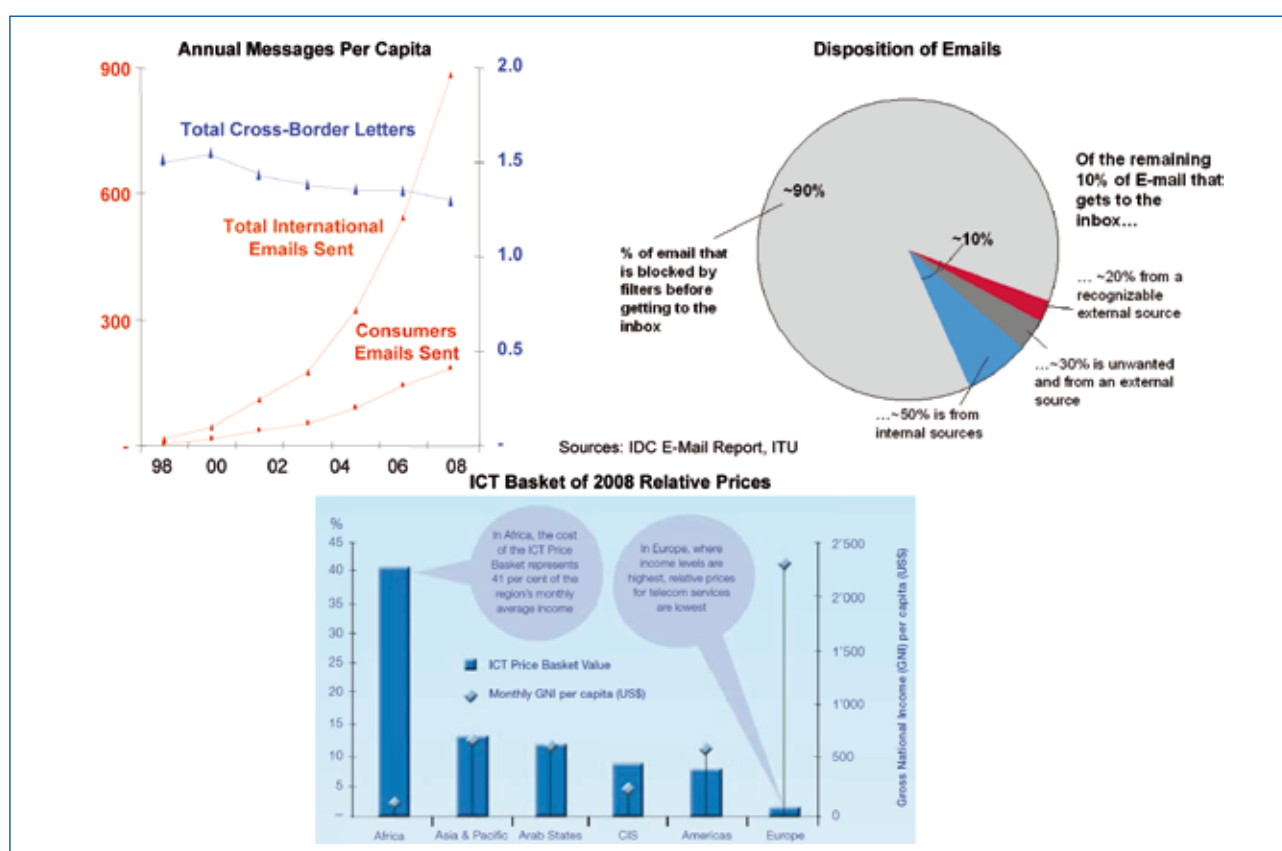
have declined considerably in the last couple of years, we note that personal correspondence, statements and payments (i.e., recurring bill payments, rebates, donations) and written inquiries have driven the substantial drop in single-piece letters. It can be argued that electronic alternatives have affected these applications.

In the past, as one type of C&T letters declined, it was often compensated by growth in another category, evidencing what had been called the “regenerative” power of mail. For example, mailed orders were severely reduced by toll-free telephone calls and the availability of credit cards. Instead, credit card solicitations and bills grew

rapidly as did mailed packages from rapidly increasing remote commerce. The upturn in mail attributed to applications such as customer-relationship mail (CRM), election-related communications, charitable solicitations and contributions, and other non-recurring mail seemed on the increase earlier in the decade, but legitimate doubts persist among many postal circles that new growth in other categories of C&T mail can be found to counter balance the decline of other categories.

Figure 32 illustrates how international mail per capita declined slowly despite the explosion in the volume of emails.

Figure 32 Email vs. Mail per Capita: Two Distinct Markets



Industry observers, and especially the posts, need to be aware of – and challenge – the “mental models” that have prevailed in many substitution assertions. It is becoming increasingly clear that the future of mail cannot be discerned by making the simple assumption that the existence of new technology causes drastic substitution.

The two curves clearly do not reflect a classical substitution pattern. In perfect one-for-one substitution, we would expect that, as one technology increases, the other declines at a similar rate. It would be very difficult for anyone to sustain an argument that substantial mail substitution is yet to happen when electronic messages already outpace physical mail by a ratio of several hundred to 1. Instead, the reality is that email is generating its own

demand for new applications that were not previously possible.

An interesting observation, made by many technology analysts is that a slowdown in the growth of PC Internet and email adoption curves has occurred in some advanced economies. One reason might be that there are other technologies of communicating brief or short messages (e.g., SMS text) and methods for accessing the Internet for instant messaging, social networking and entertainment purposes (e.g., music and video on cell phones).

Another reason might be that ‘productive’ emails between senders and recipients are being lost in a web of



unwanted emails. These 'productive' emails are the person-to-person messages and not subscribed newsletters, advertising messages or SPAM. The increasing volume of unwanted email continues to make it increasingly difficult for users to manage their personal communications.

The International Telecommunications Union (ITU) concluded that there is still is an Internet, Computing and Telecommunications (ICT) divide between the least developed nations and the G20 countries.

- Over the past 5 years, the total number of fixed Internet broadband access subscribers has grown more than threefold, from about 150 million in 2004, to almost 500 million by the end of 2009. And, over a quarter of the world's population – or 1.9 billion people – have access to a computer at home

- In 2008, China overtook the US as the largest fixed broadband market in the world. At the end of 2008, China's penetration was 6.2 subscribers per 100 inhabitants, the highest of any low or lower-middle-income economy in Asia and the Pacific.
- In Africa, there is only one fixed broadband subscriber for every 1,000 people, while in Europe there are 200 subscribers per 1,000 people.
- The relative price for ICT services is highest in Africa, the region with the lowest income levels (see figure 32 for a comparison of the relative prices of ICT services. The ITU's ICT Price Basket shows how much countries are paying for technology services, relative to income levels. It is composed of three sub-baskets: fixed telephone, mobile cellular and fixed broadband Internet tariffs. The Price Basket is computed as the sum of these three tariffs, as a percentage of monthly Gross National Income per capita).

## 8. Scenario Analysis

The dramatic changes taking place in global commerce, encouraged by the rapid evolution of the internet and the greater accessibility of information and communication technologies (ICTs) to all level of economic development, demand the universal features of the postal network as a non-exclusive, easily-accessible global supply chain.

The postal sector allows people and businesses to access the world market from where they are while assuring a local focal point even in the most remote areas. The postal sector is in a strong position to support the global growth. From what was considered to be one of the greatest threats to the postal industry, the internet, has emerged to be one of its greatest opportunities to realize even more value out of the sector's assets in both core and new value-added businesses. The Internet thus enables the postal sector to strengthen its role as a global provider of services for the facilitation of trade and commerce.

### 8.1 A Return to Growth

Data, from the World Trade Organization, show that world gross domestic product (GDP) and world exports not only move in tandem, but that export growth exceeds GDP growth. For the 2000-2008 period, exports on average increased by 2.7 percentage points per year faster than real GDP.

Trade slowed down in the last 18 months due to weakening demand from developed economies. Realignments in exchange rates and fluctuations in the prices for commodities introduced uncertainties into the global markets.

The crisis, initiated by failings in the sub-prime mortgage market in the United States and quickly spreading across world financial markets, has had a different impact across regions, with the full impact felt across all regions only in the fourth quarter of 2008 (Figure 33).

Figure 33 The Evolution of World and Regional GDP and Trade



Trade levels deteriorated fastest in Europe, falling by nearly 16% in the Q4 compared with the same period of 2007. Asia's exports declined by 5% and North America's by 7%. Trade within regions seemed to contract faster than trade between regions: trade within Europe – perhaps the most closely integrated economic area – declined 18%. In contrast, trade within Asia decreased at half this rate, while trade within North America fell 10%.

The first quarter of 2009, saw much steeper declines in each region's export rates. The strongest decline was recorded in the "other" region, which combines the Commonwealth of Independent States (CIS), Africa and the Middle East. Falling demand, due to the overall recession in the world economy, was mostly responsible for these

declines. Trade within Asia declined 9% in Q4 2008. In Q1 2009 this decline increased to about 29%.

The World Bank's "Global Development Report" determined that "although the impact of the recent financial crisis has been much deeper and broader than previous crises, the expansionary policies and financial sector interventions undertaken by governments and central banks appears to be reducing the depth and length of the recession. They also, however, will pose a challenge to economic management as the global economy begins to recover."

As a result, most economists are projecting future economic growth in industrialized nations to be slower than

in the past. In the US, for example, the CBO (Congressional Budget Office) estimated that GDP growth for the next 50 years will be about half (2%) of what it was in the past 50 years (4%). This, in turn, suggests a future of low growth or slow erosion for the IC postal service providers. In developing countries, economic growth is expected to be faster than in ICs, but, of course, from a lower base.

When comparing mail to economic activity, we find remarkable differences between lower and higher income countries and regions, most likely due to the dramatic differences in postal models between the two:

Industrialized Countries	Developing Countries
High letter volume and revenue (C&T and DM)	Low letter-post volumes. No scale economies.
Business-to-Household driven traffic	Delivery organized differently, often to post office boxes with no home delivery.
Higher salaries and benefits	Little automation, mostly manual processing
Considerable mechanization and automation	Haphazard or no regulations
Large economies of scale for home deliveries.	A recipient pays for delivery by renting PO box
The sender pays for delivery (Rowland Hill)	Cross-border mail has a higher share of total volumes and revenues
International has a lower share of the total mail	

It is beyond the scope of this project to resolve the many issues associated with the postal sectors of the least developed nations, such as:

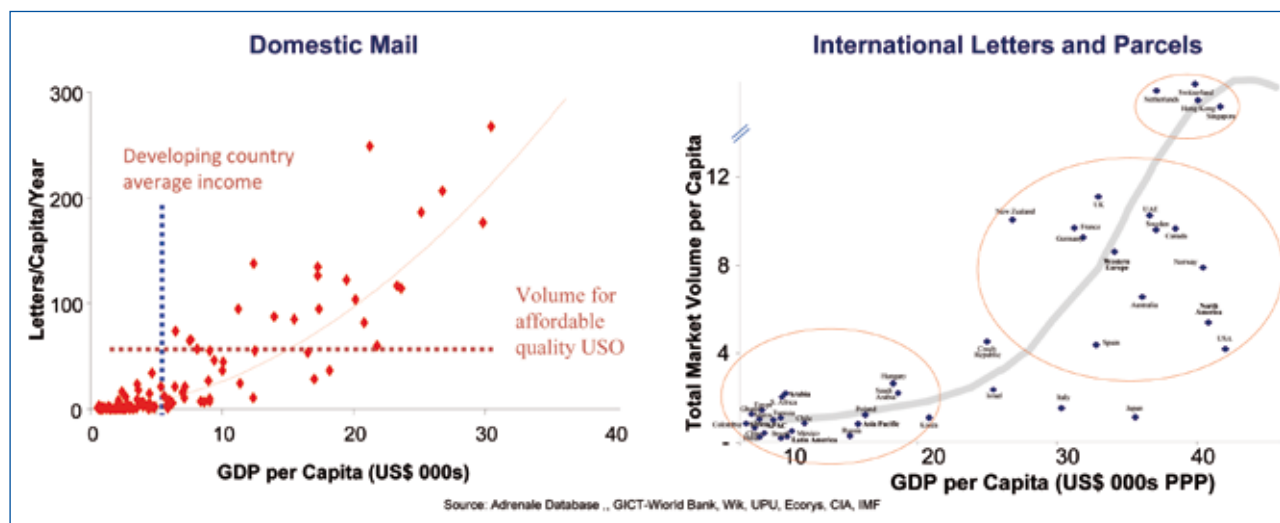
- postal markets without statutory oversight or stable regulatory frameworks, and with an associated lack of concern of the owners-governments for the sector;
- development of unregulated destructive competition, with relatively high levels of market instability and "turn-over" of illegal market players;
- stagnation of demand due to lack of customer-oriented products, high international prices, and widespread price discrimination; and

- Vicious circles of low profitability and lack of re-investment in the sector, leading to infrastructure and demand destruction over time.

However, it is important to highlight the opportunity for growth that low-income economies can enjoy when these issues are addressed.

Figure 34 shows that DCs can rapidly go up the S curve of demand growth as their economies improve, if the postal products and services that customers want are introduced and offer the value that markets expect.

Figure 34 Relating Volume per Capita to GDP per Capita



## 8.2 Statistical Analyses

Another interesting correlation between cross-border postal and package products and international exports is the positive effect of regional trade on mail volumes.

Figure 35 shows that the U.S., Europe and Australasia have considerable intra-regional exports and as a corollary, they mail and ship a substantial volume of items with public and private postal operators.

Figure 35 Intra- and Extra Regional Exports

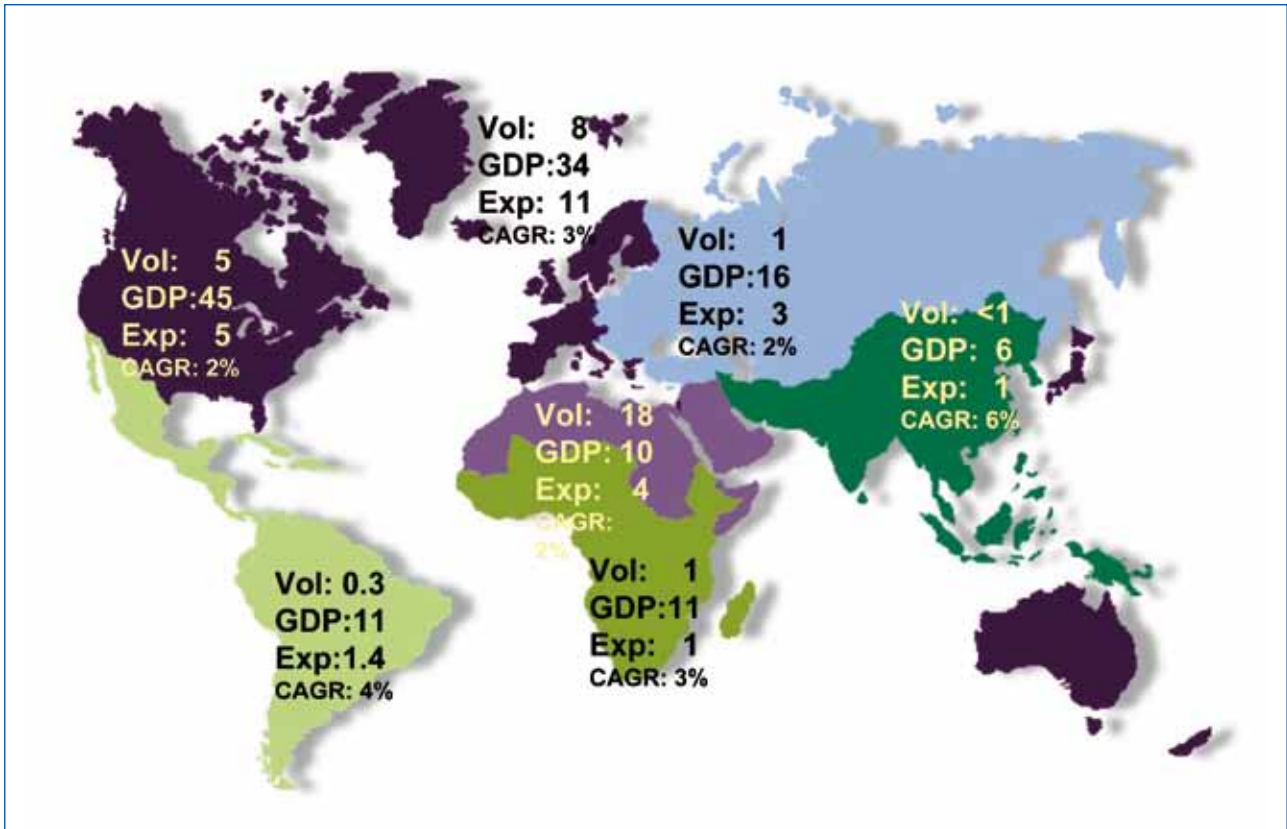


Source: WTO

The time series, regression and correlation analyses that we have conducted show that Gross Domestic Product (GDP) and trade are two of the principal economic variables that have a general relationship to international letters, flats and packages.

Figure 36 depicts by the value of the three variables by region and per capita: total market cross-border volume, GDP at purchase power parity (PPP), and exports, the last two variables quoted in US dollars.

Figure 36 Regional Comparison of Cross-Border Volume, GDP and Export per Capita, and GDP Growth



Source: Adrenale's Analysis

The results of a recent Universal Postal Union (UPU) survey indicate that postal networks are increasingly trusted to further the growth of e-commerce and provide financial services. This trust is keeping this postal sector's head above water as the financial crisis wreaks havoc on the global economy. Yet, operators are feeling the pinch, especially in the cross-border letter-post and express business segments, but parcel post is showing signs of stabilization.

Our time series analyses demonstrate that advertising and direct mail, and expedited & package services are highly correlated with economic activity and trade. Thus, with the anticipated global economic turnaround and increasing consumer interest in online shopping, the demand in these segments is likely to recover and volume may probably increase. At the regional and segment levels, the highly correlated economic and geo-demo-graphic drivers differ slightly.

Figure 37 shows a comparison of the important factors, out of a dozen econometric variables, affecting the demand of light-weight postal and package products.

Confirming the importance of economic health and prosperity in the recovery of postal and parcel demand, a high-level conference on the impact of the financial and economic crisis on the postal sector was held by the UPU at its Berne headquarters. This special debate was attended by more than 200 participants from 100 countries, including about 40 of the world's postal CEOs and leading sector stakeholders operating in e-commerce, direct marketing, consulting and equipment and technology manufacturing, attended the special debate.

A later follow-on series of surveys conducted among 15 of the world's largest Posts and private courier companies and repeated quarterly is being conducted and published by the IB-UPU<sup>19</sup>. These operators account for 66% of total worldwide letter-post volumes, 88% of parcel-post traffic, and up to 75% of express volumes. The results of this analysis, which can be considered statistically viable to analyze market evolutions, are that international parcels closely followed GDP and trade trends despite record e-commerce sales and the strong resilience of online sales to the crisis. Thus, after experiencing growth in 2008, volumes decreased by close to 5% in the last quarter of the year, and returned to growth in 2009.

Figure 37 Important Factors as Evidenced by the Stepwise Regression Analysis by Segment and Region

Letters At 90% Confidence Level	Factors	R-Squares	Coefficients
Africa	Households, Price, GDP	0.42, 0.707, 0.959	0.021, -64.5, 0.001
Arab Countries	Households, Price	0.858, 0.950	-59.4, -295.4
Asia Pacific	Price, Households	0.863, 0.992	-202.3, 50.9
Eastern Europe	Price, Exports, Poverty	0.641, 0.976, 0.995	-62.72, 0.076, 96.73
Latin America	GDP, Price	0.843, 0.904	0.003, -25.72
North America	GDP, Price	0.342, 0.897	0.03, -1852.3
Western Europe	None		
World Data	Price	0.674	-623.3
Express at 90% Confidence Level	Factors	R-Squares	Coefficients
Africa	Price, GDP	0.990, 0.995	0.056, 0.000
Arab Countries	Households, Exports, Price, Migration	0.962, 0.995, 0.997, 0.998	0.320, 0.002, 0.038, 0.004
Asia Pacific	Price, Exports	0.989, 0.997	4.143, 0.135
Eastern Europe	GDP, Poverty, Exports, Households, Price	0.954, 0.974, 0.988, 0.995, 0.997	0.001, -5.0, 0.001, 0.001, 0.364
Latin America	Households, GDP, Exports, Internet Users	0.976, 0.989, 0.996, 0.998	0.068, 0.002, 0.004, 0.001
North America	Price, Exports	0.977, 0.996	-6.834, 0.014
Western Europe	Households, Price	0.857, 0.888	4.52, 63.76
World Data	GDP, Internet Users	0.983, 0.997	0.004, 0.121
Parcels at 90% Confidence Level	Factors	R-Squares	Coefficients
Africa	GDP, Poverty, Inflation	0.988, 0.995, 0.998	0.000, -1.051, -0.959
Arab Countries	Households, Exports, Price	0.885, 0.926, 0.976	0.197, 0.002, 0.449
Asia Pacific	Price, Households, GDP, Inflation	0.982, 0.992, 0.996, 0.997	2.216, 0.406, 0.003, 15.64
Eastern Europe	Exports, Poverty, Households, Internet Users	0.946, 0.978, 0.993, 0.996	0.003, -4.63, 0.001, 0.002
Latin America	Households, Exports, GDP	0.933, 0.977, 0.993	0.034, 0.002, 0.001
North America	GDP	0.996	0.005
Western Europe	GDP, Inflation	0.982, 0.988	0.004, 221.5
World Data	Price, Net Migration	0.991, 0.998	29.87, 0.178

Source: Adrenale's Regression Analysis. Note: The important factors by region and segment are at the 90% confidence level.

<sup>19</sup> A copy of the study "The Global Financial and Economic Crisis: Initial Insights into its Impacts on the Postal Sector", is available on the UPU website at [http://www.upu.int/postal\\_economics/en/the\\_global\\_economic\\_and\\_financial\\_crisis\\_en.pdf](http://www.upu.int/postal_economics/en/the_global_economic_and_financial_crisis_en.pdf)



International letter post and express volumes appear to be feeling the brunt of the crisis' impact. But, as direct mail is less developed in the international arena, international letter post is showing more signs of stability. In a year-to-year comparison, Postal operators reported volumes varying between 3.7% and - 2.8% in the last quarter of 2008 in terms of quarterly growth rates. International express volumes went from a 7.1% increase in the second quarter of 2008 to a 2.2% decrease in the last quarter. In last-quarter comparisons of 2008 vs. 2007, express revenues declined by 7.9% worldwide. This drop is probably a consequence of consumers and businesses moving more towards lower-end, and lower-price premium services.

### 8.3 Modeling Alternatives

Economists<sup>20</sup> at many postal operators and regulators have long analyzed econometrically and forecasted mail growth or decline based on volume drivers, like the ones we have examined, namely: prices, GDP, income, exports, substitution [e.g., price/population of substitutes, other electronic diversion, cross-substitution and cannibalization], value and quality of service and share shifts among products, adult population and number of households.

Before delving deeper into the various scenarios building aspects, and detailing further the factors that could be key differentiating drivers, as well as the regional and operator differences, we describe demand through a standard structural model, perhaps the most widely used method in empirical econometrics. The general idea behind the models is to examine the demand for letters and light-weight express and package services by looking at what happens to demand over time, conditional on a dozen covariates or variables that economic theory suggests will impact demand. The model uses statistics to determine which covariates are to be included in the regression, and to choose a simple linear form

$$Volume = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \dots + \beta_k x_k + \varepsilon$$

which identifies the magnitude of the coefficients of the equation and describes the fundamental demand

relationship. These coefficients are important and, under certain restrictions, can be interpreted as elasticities. These estimated coefficients indicate whether the corresponding variable has a negative or positive association with demand and highlight the impact of a change in one of the factors on quantity.

For example, the coefficient on price in a regression on demand tells us by how much the quantity demanded of mail products changes when the price of postage or the underlying cost of terminal dues changes.

The econometric formula just relates demand to external economic and demographic data. It does not take into consideration the tactics, products and services launched by postal operators. The multiple econometric regression formulas, at the 95% confidence level, for the three segments under study are:

- 1) Demand for letter mail: Global Volume =  
 – 8670  
 – 2020 x Average LC/AO Price  
 + 3 x Population  
 + 2 x Households  
 + 1 x Internet Users
- 2) Demand for Expedited Services =  
 – 1536.1  
 – 7.1 x Average E&PS Price  
 + .5 x Population  
 + .1 x Households  
 – .1 x Internet Users
- 3) Demand for Parcel Services =  
 – 160.1  
 – .2 x Average E&PS Price  
 + .1 x Population  
 + .1 x Households  
 – .1 x Internet Users

Figure 38 presents the 2013 estimates of the demographic and econometric data that would guide the global demand formula shown above.

Figure 38  
2013 Estimates  
of Econometric Data

Global Data	1998	2008	2013 Estimate	98-08 CAGR	08-13 CAGR
Average LC/AO Price	\$ 1.3	\$ 1.7	\$ 2.0	2%	2%
Average E&PS Price	\$ 36.3	\$ 45.5	\$ 55.4	2%	2%
Population	3,947.0	4,321.8	4,773.9	1%	1%
Households	1,036.6	1,148.7	1,268.9	1%	1%
GDP (PPP)	\$ 29,810.6	\$ 53,104.6	\$ 71,368.2	6%	3%
Exports \$B	\$ 3,895.1	\$ 10,514.6	\$ 17,127.2	10%	5%
Net Migration/1000 Pop.	60.6	55.6	52.9	-1%	-1%
Pop below Poverty	33%	30%	29%	-1%	-1%
Inflation Rate	8%	6%	4%	-4%	-4%
Mobile Cell	181.5	2,328.5	4,580.6	29%	7%
Internet Users	226.3	1,089.8	1,951.6	17%	6%
Literacy	84%	88%	89%	0%	0%

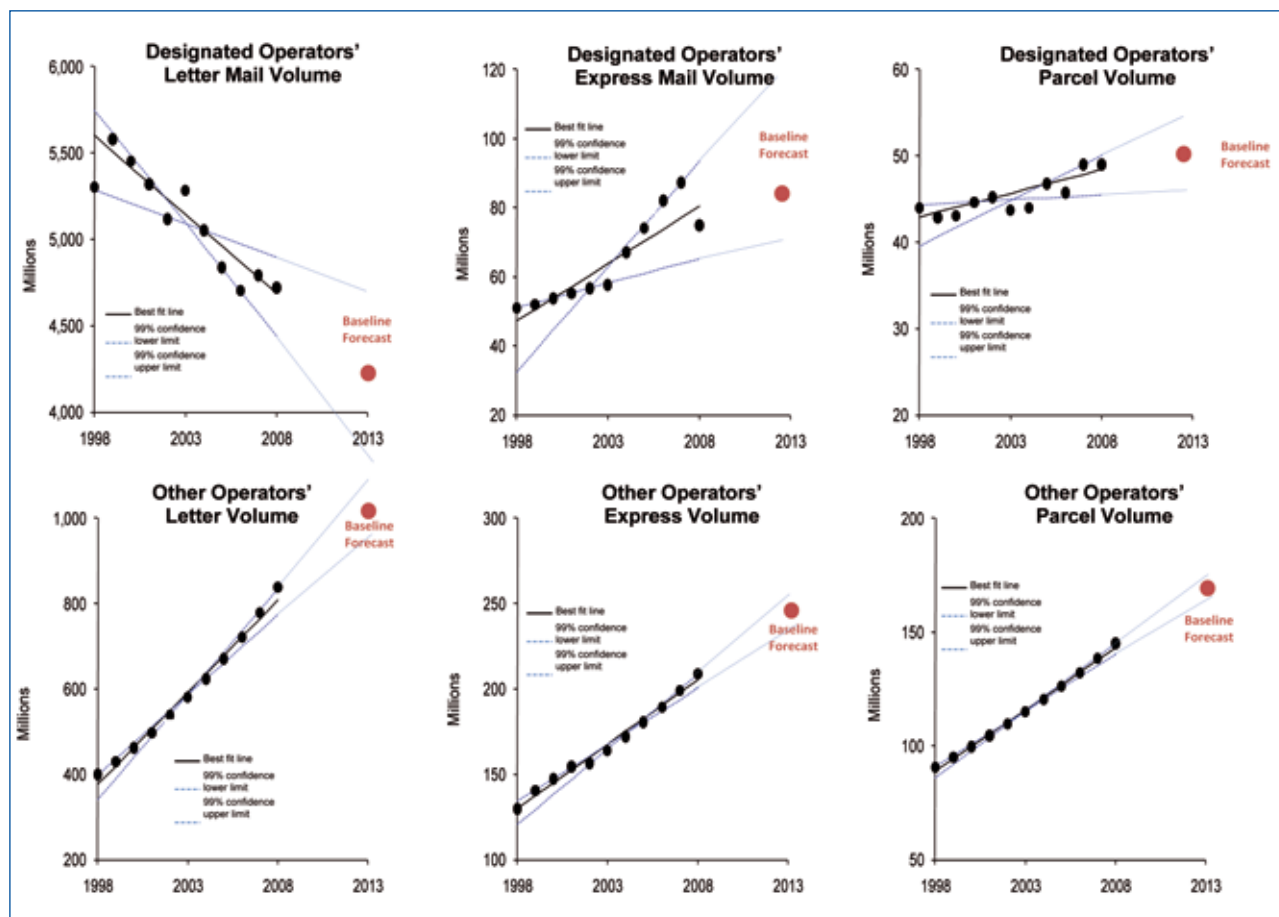
<sup>20</sup> Example econometric analyses include: in the US: EMA, Tolley, NALC, and Wolak. In the UK: Nankervis, Carlslake, and Rodriguez. In Finland: Nikali. In Brazil and Portugal: Ferreira, Lagoa, Pimenta and Santos. In France: De Rycke, Florens, Marcy, Toledano. Developing countries: Guislain at World Bank, Anson at IB-UPU.



To illustrate how the status quo scenario might evolve with a return to growth of most global economies, figure 39 illustrates the historical trend lines, by product segment and type of postal operator. The best-fit line shown

in the figure as a black center trend-line approximates the formulas presented earlier for the total volume of letters and E&PS services.

Figure 39 The Baseline Scenario of Future Global Cross-Border Demand by Segment and Operator Type



Source: Adrenale's Analysis

The baseline future scenario would extend the historical trend lines and project the future world-wide demand for light-weight postal and package products. The figure also depicts how the formulas above, which calculate the baseline evolution of the total demand by product, apply to the DOs and the other competing operators.

The linear trend lines suggest that at a global level, the DOs' volumes of letter mail and light-weight expedited and standard packages (the top 3 boxes) may not recover and grow very rapidly.

Figure 39 also shows that the worldwide cross-border LC/AO volume at DOs would continue dropping at about 2% per year to about 4.300 million pieces by 2013, while their EMS and parcel volumes would grow by 2% annually to about 150 million items in total. The volume handled by other postal operators would return to historical levels of about 5% per year growth in volumes. By 2013 their worldwide international LC/AO volume would exceed 1

billion pieces, and expedited and standard light-weight shipments would increase to about 425 million.

These trends are more or less accentuated depending on the regions and the development status of individual countries. The industrialized nations of Asia Pacific, North America and Western Europe, where economic activity is expected to return to growth albeit at a slower than historical rates, are likely to experience a continued decline in cross-border letter mail, associated with a return to slow growth in the volume of international E&PS shipments. The developing countries of Africa, Asia and Latin America may fare better as the recent dramatic declines in the volumes of international letters and packages are anticipated to subside.

#### 8.4 Prognosis for the Future

A finer modeling of alternatives futures has been conducted to determine the evolution of mail and pack-

age demand over the next 5 years. Three consolidated scenarios are presented to bracket the range of potential outcomes, with adequate variations by region and product segment as dictated by the statistical and trend multi-year analyses:

1) The optimistic scenario, where the total postal and parcel market volume returns to growth and the DOs regain lost share by introducing products and services that meet and exceed customer needs.

2) The baseline scenario, where the market grows at historical levels, as the global economy recovers slowly, and the share of DOs remains relatively constant.

3) The pessimistic scenario, where the DOs continue losing share of a market volume that continues its recent downward trend, possibly due a double-dip recession, a reduced customer demand for postal and shipping products, or a slower than anticipated economic up-tick. The “Death Spiral” scenario – whereby a postal operator increases postage rates to counter rising costs and decreasing revenue from declining mail volume; the increase in prices causes mail volumes to fall further. This vicious circle – which continues in “spiral” fashion – was discarded based on our belief that such a scenario is highly unlikely politically or institutionally, in the foreseeable future.

## 9. Summary Findings

DOs around the world often attribute the decreases in their own international volume growth to substitution. However, a consensus has not yet emerged on what is meant precisely by 'substitution'. Terms such as 'electronic diversion', 'rationalization', 'structural changes in demand' and 'market redistribution' are also used. Postal researchers and strategists have found these terms refer to a host of factors in addition to substitution, including: cutbacks in business-originated mail volumes due to economic pressures on mailers; market share shifts due to emerging competition from market liberalization; product substitution (e.g., to a lower-priced class), and general changes in the underlying drivers of mail.

### 9.1 Key conclusions in regard to overall volume trends

Beyond the detailed quantitative results and their interpretations that are presented in the body of this report, we developed a number of overall demand-related conclusions.

- Few cross-border markets and flows continued to grow in the last couple of years. DOs claim that they are suffering volume losses at a rate of over 5% per year in the core correspondence and transactions (C&T) letter business. This decline may not take into consideration the rapid growth of competing operators, which has not, in most markets, made up for the declines in the volume of letter mail transported by the designated DOs. As direct mail (DM) is less developed in the international arena than in domestic markets, that segment of letter post has shown signs of stabilizing. Surveyed postal operators reported annual volume growth varying between +4% and -4%, dipping into negative territory in the last quarter of 2008 and the first three quarters of 2009 in terms of quarterly growth rates.
- Postage price increases, particularly during the economic downturn periods of this first decade of 2000s, continue to drive mailers to seek additional cost-avoidance alternatives, like: outsourcing, shifting mail from premium to economy categories, and using more work-sharing incentives, increasingly available in cross-border direct-entry flows, such as pre-automating, pre-sorting or downstream access. This trend was seen during the 2001-2003 economic recession in the US and has accelerated in the recent 2008-2009 downturn. Thus, any price adjustment or hike has had a substantial detrimental effect on volume growth. Postal operators and regulators regularly present comparative charts of domestic tariffs across countries when communicating their recent rate changes. These documents show that in recent years, most posts have improved the quality levels
- of their economy services, and this in turn, is driving mailers to shift volumes from premium air services to lower-priced standard or deferred surface and surface-air-lift (SAL) products.
- Although attributed predominantly to electronic diversion, the recent declines in the growth of international letter mail delivered by the DOs can also be due to a number of other factors. For example, senders rationalize their mailings by consolidating shipments, combining communications with other mail, and reducing mailing frequencies, shapes and weights such as with folded, smaller, double-sided printing on lighter paper. As a result, the growth of outsourcing and of pre-prepared mail constituted a considerable opportunity for mail service providers, who have experienced substantial growth in the key markets of North America, Europe and Asia-Pacific. These intermediaries have fueled the growth of competition from private postal operators and from foreign posts operating in each other's markets. Additionally, the availability of finer geo-firmo-demo-graphic data and the trend in direct marketing toward personalized digital printing allows businesses to pinpoint their targeting, increasing the relevance and value of advertising mail while reducing the volume of pieces that may otherwise have been sent in the former era of blanketing entire markets or broadcasting direct mail indiscriminately.
- The decline in household-generated international correspondence has been more precipitous due to electronic alternatives and the changing habits of younger generations coming of age in the era of e-mail and text-messaging. Some analysts are now suggesting that the stagnant or declining rates of personal cross-border letters could signal a "tipping point" and that, from this point forward, volume will decline even more rapidly. Prior to the two recent economic recessions, the growth of business-sent advertising and transactional volume tended to marginally offset the drop in single-piece consumer-letters. As a result, we conclude that, once world economies return to growth, we are likely to enter a period of potential growth in business-originated pre-prepared mail and continued decline in household-sent single piece letters, resulting overall in periods of low growth and slow erosion of letter volumes rather than one of accelerated diversion or growth.
- Postal operators are hopeful that bringing together electronic technologies and mail will create vibrant new revenue streams for industry participants. The drive to add value to the mail piece is taking advantage of innovation to make each mailing relevant to the end consumer and an essential tool for business customers. In fact, Mail Moment research shows

that consumers continue to look forward to mail they are expecting and value relevant offers that may be included. In the US, Europe and elsewhere, over three-quarters prefer to receive correspondence by mail rather than electronically. Postal operators are also capitalizing on the combination of technologies and communications media. Postal executives in advanced DOs are announcing that 'Intelligent Mail' systems are becoming fully operational and considerably increasing the overall value of mail as an exciting and dynamic business communications channel.

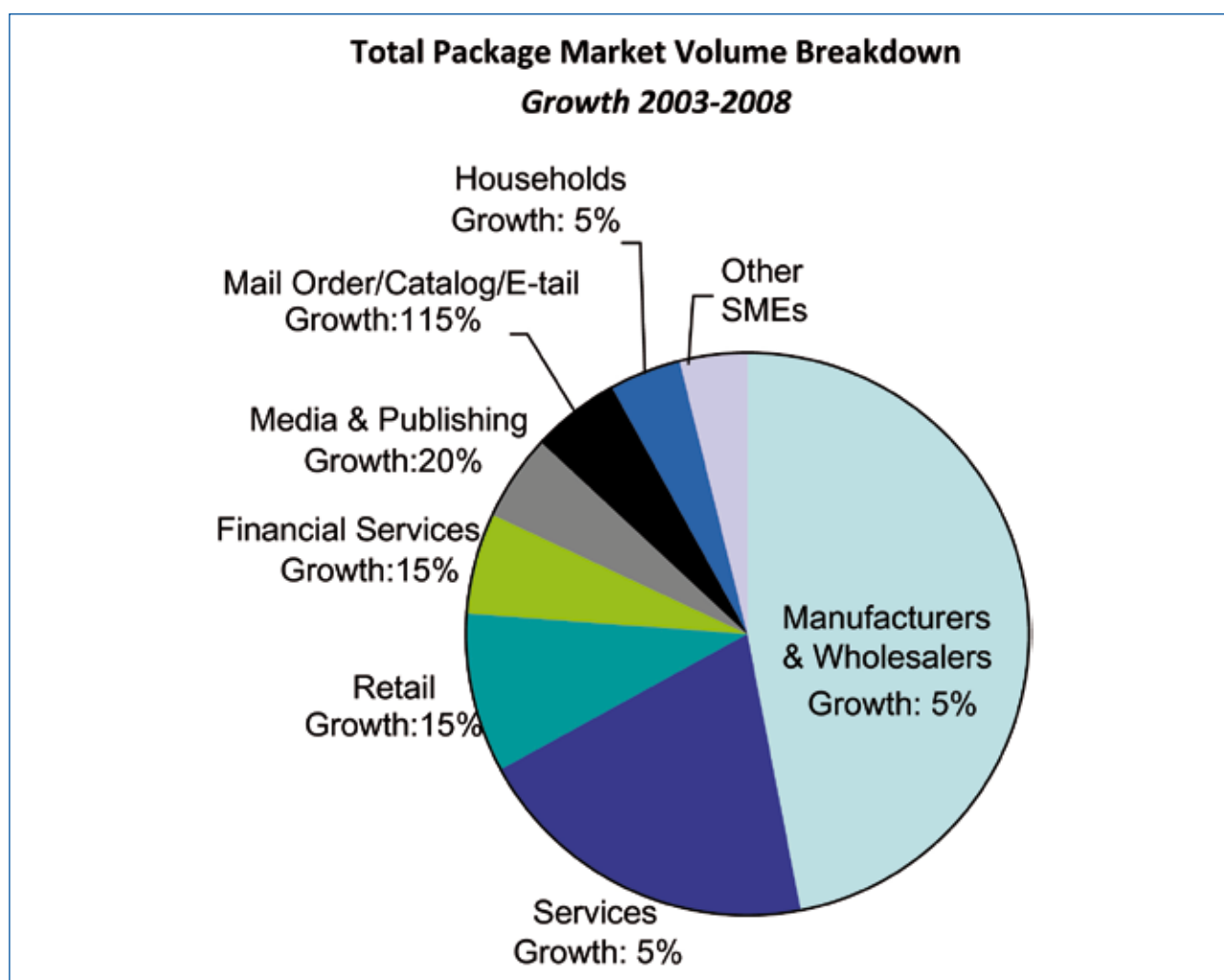
- Packages have benefited considerably from the Internet e-tailing and from intelligent tracking technology that enables the electronic notification of a postal delivery. EBay now estimates that its users ship internationally more than a hundred million items annually. Electronic items, media mail (e.g., CDs, DVDs), health shipments (e.g., medicines, prescriptions), and other lower-weight merchandise are also fueled by Internet-based ordering. The news is not so positive, during the 2008-2009 economic recessions. After experiencing growth in the first three quarters of 2008, volumes decreased by 5% in the last quarter among UPU surveyed operators. Experts again believe that international parcels are not benefiting from e-commerce as cross-border sales remain challenged by many service level obstacles, identified in the customer needs section.
- As a consequence of consumers and businesses increasingly moving towards lower-end express services, express revenues have declined by close to 8% worldwide in 2008. International volumes went from a healthy 7% increase in the first quarter of 2008 to a 2% and 4% decline in Q4 of 2008 and Q1 of 2009, respectively. The trend away from overnight B2B flows toward B2C express-lite and time-definite deferred services can benefit designated postal operators, provided they meet customers' need for a reliable, traceable service.
- Long-standing drivers of mail trends are further validated, although some relationships are not as strong as they were historically. They underpin a positive prognosis for overall increases in demand, albeit at lower rates of growth than in the past:
  - The World Bank expects the global economy to eke out growth of about 1% in 2009, the slowest pace since 1982, when global growth was 0.3%. In 2010 and beyond, developing countries may re-

turn to over 5% growth. The net private flows of capital to developing countries are also projected to return to growth, albeit at a much slower rate than in previous years. Annual investment growth is projected to slow to close to 4% from over 13% in 2007. The anticipated economic recovery will positively affect mail demand. However, in most countries, international letter and package mail growth is likely to be slower than GDP and trade growth in the future. GDP and trade in the G20 are expected to return to the traditional 3% and 6% annual growth, respectively, over the next 5-10 years. This underlying growth should provide opportunity for expansion and make money available for business to communicate with and ship products to their customer base.

- Continued household, education and income increases are likely to have a positive effect on the major mail streams. Furthermore, as households become wealthier, they tend to spend more on services and acquire account relationships with firms in telecommunications, cable TV, banking, investment and insurance. These relationships increase the number of accounts per households and generate bills, statements and relationship mail. By some estimates close to a billion people will enter the ranks of the middle-class around the world. They will need mail services.
- Business growth, particularly in the sectors that are mail intensive, is another driver of demand. The net increase in the number of businesses in advanced economies is predicted to return to its former level. This is equally true of small, medium and large-sized business enterprises. With the economic recovery anticipated for 2011, growth in business activity will result in additional advertising and package mail.
- The effects of population migration and demographics are becoming increasingly complex. Trends such as aging baby-boomers, population shifts to economically affluent regions, mobile populations creating urban and metropolitan revivals, and growth of multi-generation, multi-ethnic and non-traditional households, are changing the traditional patterns of cross-border flows.

As a consequence of these market trends and dynamics, certain segments of the postal and package market have benefited considerably. Figure 40 shows how certain industry sectors, particularly those sending mail and parcels to households, have increased their volume of packages.

Figure 40 The Package Market Breakdown and 2003 to 2008 Estimated Growth



Source: Direct Marketing Association, European Mail Order Association

## 9.2 Key Areas of Opportunity for Growth

It is worthwhile to repeat that advertising mail and package services are the principal areas of potential growth for postal operators that meet or exceed customer needs at an affordable and predictable price and service blend, while adding value through innovative information technology accompaniments that surprise and excite customers.

The return of cross-border package services to growth appears more likely and imminent than that of letter mail. That volume increase is likely to occur in the household-destinating light-weight segment, which is more price sensitive than the high-value, high-weight B2B segment and which also naturally favors postal operators. The share of B2C shipments has doubled in the last decade to about 32% of total packages. However, for the national DOs to gain a significant share of the impending growth in demand, the price of light-weight parcels must be rationalized. Figure 41 reveals the differences in prices and

delivery costs (e.g., terminal dues, in-land parcel rates) between a 2kg packet and parcel, for a few example countries.

The distinction between a packet and a parcel of identical weight is somewhat lost on customers, particularly e-tailers sending flexible, smaller items such as articles of clothing or digital media and books, medical or retail samples, or electronic components (e.g., cameras, mobile phones, video screens, GPS displays).

In fact, business clients privately convey that they believe that packets in the letter mail stream receive a more favorable treatment at Customs or perhaps undergo less scrutiny. Customers also report that the distinctions and intricacies of the deliveries systems of the various receiving operators are of little concern to them. They do not care that some DOs have a separate, more dedicated division, business unit or delivery force for parcels, while others use the same letter carriers for package distribution.

Figure 41 Differences in Costs and Prices for Various Packets and Parcels Weights in Selected Countries (SDRs)

SDRs and Percents		Price	Inbound TD	Inbound	Target System TDs		Price	Outbound TD
2 kilograms Packet		Domestic	% of Domestic	TD/item	Rate/item	Rate/kg	International	% of Int'l
USPS (Flat Rate Envelope)		3.77	90%	3.41	0.16	1.62	9.83	40%
CPC		N/A	N/A	3.97	0.19	1.89	21.06	19%
La Poste		3.41	122%	4.15	0.25	1.95	9.24	43%
DPWN		3.39	123%	4.15	0.25	1.95	7.82	50%
Transition System Rate per Kg		Avg DCs		7.45		3.73	13.10	57%
2 kilograms Parcel		Price	Inbound ILR	Inbound	Parcel Inward Land Rates		Price	Outbound PILR
		Domestic	% of Domestic	Rate/item	Rate/item	Rate/kg	International	% of Int'l
USPS (Small Flat Rate Box)		3.81	231%	8.78	5.36	1.71	10.88	110%
CPC		15.02	84%	12.60	8.06	2.27	38.87	31%
La Poste		3.41	347%	11.80	10.68	0.56	12.62	95%
DPWN		5.99	244%	14.64	13.10	0.77	7.82	153%
Developing Countries		Average DCs		9.65	7.55	1.05	18.60	52%
Average of Competing Integrators		13.42					71.40	
5 kilograms Parcel		Price	Inbound ILR	Inbound	Parcel Inward Land Rates		Price	Outbound PILR
		Domestic	% of Domestic	Rate/item	Rate/item	Rate/kg	International	% of Int'l
USPS (Medium Flat Rate Box)		7.50	267%	20.05	6.54	2.70	30.38	58%
CPC		15.56	125%	19.40	8.06	2.27	49.59	35%
La Poste		14.78	91%	13.48	10.68	0.56	46.85	37%
DPWN		14.35	118%	16.95	13.10	0.77	39.82	44%
Developing Countries		Average DCs		12.80	7.55	1.05	29.20	44%
Average of Competing Integrators		19.19					97.75	

Source: Adrenale's Analysis. Note: Outbound TDs & ILRs % of prices are averages of the inbound TDs of the other countries.

The UPU has a role to play in the rationalization of the terminal dues and parcel inward land rates, particularly for the lighter-weight categories. Of course, the end customer would prefer to see a price for the 2kg parcel to be closer to that of a 2kg packet (e.g., around 10 to 12 SDRs as shown in the figure above). Consequently, the delivery charge could also be closer to the terminal dues for a 2kg packet (e.g., around 3 to 4 SDRs). The in-land parcel rates, averaging about 10 to 15 SDRs per item, may seem prohibitive to both mailing customers and sending postal operator. While there is a visible difference between the

packet and parcel delivery charges, it is important to observe packets do not receive value-added features such as signature upon delivery, customer inquiry support, acceptance of liability for lost, damaged or rifled items, or the right to send larger dimensional items. Customers understand that these additional services add-value and come at a higher price and make their purchase decisions accordingly. Nonetheless, it appears that the higher in-land rates are encouraging operators to form alliances with their key trading partners, and agree on exchange rates outside of the UPU system of remunerations.



## 10. Recommendations

It is evident that the postal markets everywhere have been drastically disrupted, as businesses and consumers around the world have been suffering through the worst recession in living memory. For a while it looked like many economies, and consequently postal and package markets, were about to implode. Steady, reliable customers stopped buying postal services or cut back their spending dramatically.

Nearly every company cut its cost structure so hard that many have radically reduced or eliminated their expertise in what were once considered critical areas, while outsourcing these core competences to external service providers who have increased their influence in the entire value chain.

In the new post and parcel world that is emerging from the wreckage of the recession, much has changed. The one thing of which one can be sure is that almost everything about the old products, and the old ways of marketing services (e.g., placement, promotion, pricing) and conducting the postal business are probably no longer accurate.

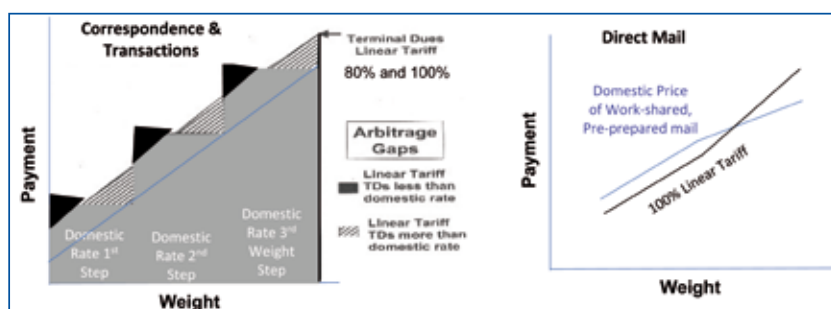
The UPU can pro-actively lead postal operators to success by helping them realign the product portfolios in each market segment, and driving change in the right direction. In our assessment of what motivates customers' behaviors, we note that the buying criteria have shifted dramatically:

- In the letter market, the general international LC/AO category needs to be tailored so that it accommodates a cross-border advertising mail sub-product that directly enters the pre-automated, pre-sorted, address-verified, and downstream-entered, in the bulk domestic standard service level stream of the destination country. In domestic streams, this type of direct mail product is usually priced, often through negotiated service agreement with major mailers, at a 30% to 40% discount off the regular consumer letter rate. It is also, sometimes handled through a "second category" economy or deferred mail stream. Consequently, terminal dues for such a cross-border DM service could also be marked down from the current TD rates and still cover the cost of distribution and delivery by the destination postal operator. Of

course, this assumes that the international direct mail marketer is willing to perform the work-sharing tasks required to earn the domestic mail discounts, and therefore enable the destination operators to recover their costs.

- The terminal dues and ultimate pricing of international C&T (correspondence and transaction) mail could remain the same or even rise slightly to cover the additional origin and destination handling costs. It appears that the demand drivers for and e-diversion of cross-border C&T letters have altered the volume so dramatically that it is unlikely that this mail stream will experience a "V-shaped" recovery and return to growth. However, a strategy of "milking the cash-cow" of international letter revenue is not advisable in the presence of increased liberalization and competition in cross-border markets.
- It is prudent to not dramatically change the item and weight structure of the terminal dues system, which is the result of decades of work and refinement by a large number of UPU member countries. It has involved countless meetings, studies, questionnaires, financial analyses, and perhaps most importantly, a lengthy process of consensus building to find a satisfactory solution amenable to all UPU members. Moreover, as all UPU member nations transition into the item and weight calculation, some of the low-weight TD rate variances identified in this report will be addressed eventually. Even within Europe, due to the number of complex issues involved, the signatories to the REIMS III system have taken many years to develop and revise a process tailored to industrialized nations. Furthermore, the European Commission has, for years, closely examined the impact of this agreement on mailers, public postal operators and private sector service providers and integrators. Specifically, these oversight agencies have had concerns regarding the appropriate percentage of domestic tariffs, usually ranging between 60% and 80%, and have called for postal operators to respond to this concern by developing transparent cost-accounting systems. Figure 42 shows that regardless of the percent of domestic tariffs used there will always be an opportunity for arbitrage by competing market participants. The arbitrage gap can be reduced when the transition to domestic tariffs by country and product is completed.

Figure 42 Relationship between TD's Linear Tariff and Actual Domestic Postage Rates



Source: Adrenale's Analysis

Furthermore, it appears that business customers have adapted to the various systems of remunerations for delivery of their items in the destination countries. Market-ers, in particular, have learned to rationalize their mailings and optimize their flows to maneuver between the various rate gaps in order to minimize their costs.

- For international express services, it is evident that co-branded products (e.g., FedEx Global Express Guaranteed at USPS and CPC post office counters, UPS Expedited Shipments at Poste Italiane's retail outlets) command a high price premium over the DOs' EMS service. This is due to the continued demand by a less price-sensitive market niche for the much higher service level and feature set offered by courier companies. Although that market niche is quite different and much smaller than the customer segment requesting the second-tier EMS postal service at the same counter, the demand for these higher-priced, higher-service expedited products continues to grow at double digit rates, with a corresponding decline in the share of the DOs' EMS service. This suggests that unless the DOs' EMS service is substantially improved and promoted as a guaranteed date-certain delivery, its growth remains uncertain for the foreseeable future. In fact, the research suggests that EMS customers have not upgraded to the full courier service. On the contrary, they either stopped mailing altogether or switched down to a slower and less featured priority service.

- International lighter-weight package products and services also need to be retooled, under the leadership of the UPU, to meet buyers' changed motivations. During the recent recession customers have stressed even more forcefully than ever before that their main buying criteria were 'price and service'. Customers' buying behavior shows that they are still interested in speed and features—while also putting considerable emphasis on the price for the expedited service and its attributes. Postal operators cannot continue to provide a slow, no frills small package service in light of customers who increasingly expect a minimum threshold of value (e.g., tracking or electronic notification of delivery), and Customs authorities who expect "electronic pre-advise of content information. In the era of the Internet, it is possible to shift customers attention from "price" to 'value for money' with a well designed cross-border parcel product that takes advantage of the strengths of postal operators. Mirroring the services of alliances such as KPG and EPG – an example of such a premium mail service, positioned between the current DOs' parcel and EMS products, is depicted in figure 43 – one can envision a flat rate, up-to-2kg parcel, with say a 3 to 5 day intra-regional and 5 to 8 day inter-continental delivery standard, priced at around 10 SDRs (with the receiving country getting 40% of that for final delivery).

Figure 43 Opportunity to Restructure and Simplify the Features and Prices of Parcels

Consumers and Small Business

International

Comprehensively restructure and simplify prices.

**Express Mail International**

- Reliable 3- to 5-day service
- Online discount
- Flat-Rate envelope option
- Tracked and traced



**Priority Mail International**

- Reliable 6- to 10-day service
- Online discount with delivery confirmation
- Flat-Rate box and envelope option
- Small box (22x14x4 cm) up to 2kg: Regional Price = \$10.95 US to Canada; World Price = \$ 12.95
- Medium box (35x30x9) up to 10kg: Regional Price = \$25.05 US to Canada; World Price = \$ 41.95



Source: United States Postal Service

- Clicking and shipping on-line would garner a moderate price discount for the customer to be compensated for performing activities normally conducted by postal window clerks. Furthermore, free pick-up by a postal letter carrier would be arranged at no additional cost since it would be on the normal carrier route and would form part of the normal delivery round. Special services such as end-to-end tracking or delivery notification/confirmation would be optional for a nominal fee. Customs clearance pre-advice documents would be simplified and offered in electronic and paper form, and any needed duties would be pre-determined and presented to the sender with the option of paying for them up-front to expedite clearance. The new service would also be linked to and prominently displayed on all the e-tailers web sites worldwide. So that, for example, when an international order is placed, on say an EBay or Amazon site, the parcel product would appear as a choice on the website. Recent research by Mail Order Associations in Europe and North America revealed that Internet buyers want choice. 57% of consumers and 70% of business owners would have a more favorable opinion of online vendors if they could select their delivery company; and 12% of consumers and 28% of business owners will not even make a purchase from an online company that does not offer a choice for delivery. As a result, about 14% of customers change delivery providers every year. This used to be in the single-digits, but now technology enables price-service shopping.
- Accompanying the new product and service introductions, considerable changes are needed in the product positioning, marketing messages and sales pitches of postal operators. Here too, the UPU can support its member countries in promoting the new cross-border services. The UPU can take advantage of its new .Post domain to promote electronic "word-of-mouth" through links with social networks, con-

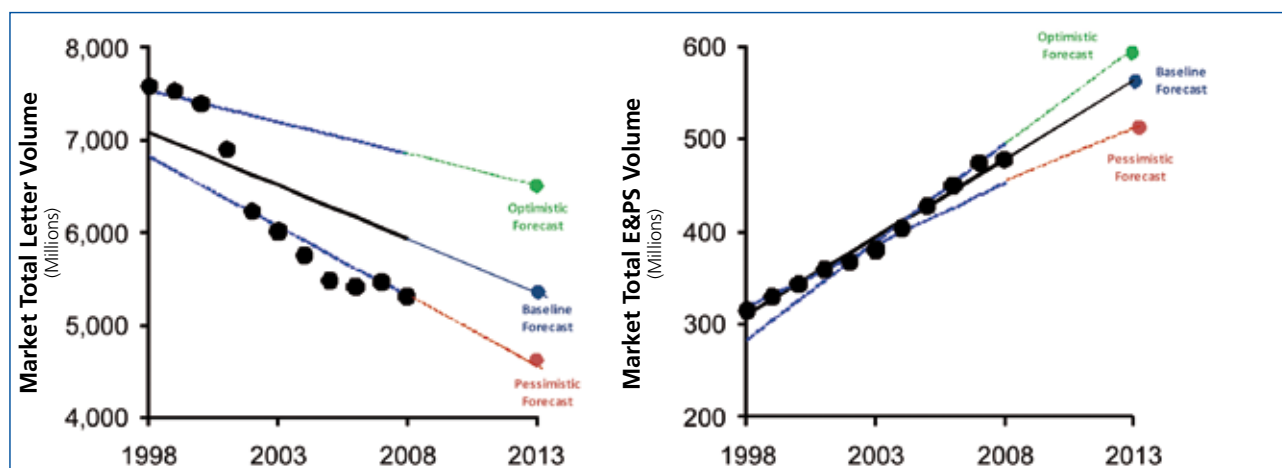
sumer generated media, and postal IT infrastructures. A concerted and collaborative marketing and product promotion effort would be needed to boost brand awareness, trial and repeat, and build on the wave of growth that the new package product is likely to catch. In the social networking era, the posts cannot let anyone else shape their brand. A big buzz needs to be created around the wonderful new redesign.

Looking forward, we believe that the right product development, placement, pricing and promotion under the leadership of the UPU would turn the downward curve of the international letter mail stream towards a notable recovery, and would allow DOs to regain share in the light weight expedited and package services market that is likely to return to growth with the global economic recovery expected for 2010.

As mentioned earlier and shown in figure 44, the three consolidated scenarios that bracket the range of potential outcomes, would differ by region, with Africa and Latin America lagging behind the other regions in postal market growth. These scenarios are not only based on a forecast of external events and geo-demographic and economic projections, they also estimate the extent to which postal operators respond to the market dynamics and satisfy the needs of their customers. Overall, the scenarios in order of likelihood are as follows:

- The baseline scenario, where the market grows at historical levels, as the global economy recovers slowly, and the share of DOs remains relatively constant. This translates to flat growth in the letter market, with the recent rapid decline tapering off, and moderate growth in the demand for E&PS services. Consequently, the global cross-border letter mail and lower-weight package markets would reach 5.5 and 0.5 billion items, respectively. The DOs' share would remain at about 85% and 25% respectively.

Figure 44 The Future of Letter Mail and Light-Weight Express and Parcel Services



Source: Adrenal's Analysis based on the Master Database for the 40 countries analyzed.

- a. The optimistic scenario, where the total international letter and E&PS market volumes and revenues return to growth and the DOs regain lost share in both by introducing products and services that meet and exceed customer needs. Thus, the overall letter market would grow, by about 3% per year, to close to 7 billion items by 2013, and the DOs' LC/AO volume share would return to its 2003 level of 90%, gaining 1% per year starting from its 2008 level of about 85%. In the E&PS market, demand returns to double-digit growth to close to 600 million shipments by 2013, mostly in the lower-priced, deferred business-sent cross-border packages. Furthermore, the DOs would capitalize on the international growth in the SME segment and gain share. The DOs' E&PS volume share would inch up slightly from its current level of about 25%.
- b. The pessimistic scenario, where the DOs continue losing share of a market volume that continues its recent downward trend, possibly due a slower than expected global economic recovery or a double-dip recession. This results in a continued decline in the letter market, and flat growth in the demand for E&PS services. Consequently, the global cross-border letter mail would continue declining at about 2% per year, dropping to below 5 billion items by 2013. The E&PS market would grow moderately but much

below historical levels, The DOs would also continue losing share to other market participants, reaching, by 2013, 80% of the international letter market and 20% of the cross-border, lighter-weight E&PS market.

Figure 45 shows that the prognosis for growth differs by region. The return to growth is likely to happen in North America, Europe and Asia Pacific first. Several postal operators in these regions have strengthened the limited partnerships (e.g., EPG, KPG) that they have formed in order to take advantage of the expected growth in B2C lighter-weight E&PS market. For other regions, the prognosis is not as promising. For example, the volume decline in Africa, Latin America, and Arab and Eastern European countries has been so severe in the last decade that it would take a concerted and rapid redesign effort by the UPU and the postal operators of these regions to turn the outbound demand curve around. This turnaround may take longer and be slower than in other more affluent regions. The developing countries in these regions could, however, benefit fairly rapidly from the growth in inbound revenues from any potential increase in letters and packages they deliver on behalf of other postal operators, reversing the current trend of ever lower terminal dues and in-land parcel rates income which they heavily rely on to supplement their incomes.

Figure 45 A Prognosis of Growth for the Letter Mail & Light-Weight E&PS Market that Differs by Region (billions)

<b>Letters</b>	<b>2003</b>	<b>2008</b>	<b>2013 E</b>		<b>E&amp;PS</b>	<b>2003</b>	<b>2008</b>	<b>2013 E</b>
North America	1.2	1.3	1.4		North America	0.14	0.18	0.22
Latin America	0.1	0.0	0.1		Latin America	0.01	0.01	0.01
Eastern Europe	0.1	0.1	0.2		Eastern Europe	0.01	0.01	0.01
Western Europe	3.3	3.1	3.4		Western Europe	0.14	0.17	0.21
Asia Pacific	0.7	0.7	0.8		Asia Pacific	0.08	0.10	0.11
Africa	0.1	0.1	0.1		Africa	0.00	0.00	0.00
Arabic Countries	0.3	0.2	0.2		Arabic Countries	0.01	0.01	0.01
<b>Sub-Total</b>	<b>5.9</b>	<b>5.6</b>	<b>6.0</b>		<b>Sub-Total</b>	<b>0.38</b>	<b>0.48</b>	<b>0.58</b>
<b>DO's Letter Share</b>	<b>2003</b>	<b>2008</b>			<b>DO's E&amp;PS Share</b>	<b>2003</b>	<b>2008</b>	
North America	91%	84%			North America	14%	16%	
Latin America	84%	68%			Latin America	25%	25%	
Eastern Europe	97%	96%			Eastern Europe	14%	16%	
Western Europe	87%	81%			Western Europe	30%	27%	
Asia Pacific	97%	97%			Asia Pacific	44%	44%	
Africa	98%	98%			Africa	17%	19%	
Arabic Countries	99%	98%			Arabic Countries	15%	17%	
<b>Sub-Total</b>	<b>85%</b>	<b>78%</b>			<b>Sub-Total</b>	<b>27%</b>	<b>26%</b>	

Source: Adrenale's Analysis based on the Master Database for the 40 countries analyzed.

Furthermore, the substantial opportunity for increasing SME exports is recognized by many governments, who have established lofty, and perhaps unrealistic, growth goals (e.g., doubling volumes in 5 years). The UPU and designated national operators can support these efforts, particularly in the key areas of need: affordable product shipping, good service levels, customs clearance, and bill-

ing and payment. Currently, even the SMEs that trade internationally do so primarily with a single country. Chambers of Commerce around the world estimate that about two-thirds of SMEs export to one country, usually one with a linguistic and cultural affinity, but would welcome the opportunity to expand to other nations and regions.

In summary, the insight that can be drawn from this in-depth research and analysis is that postal operators and stakeholders have the wherewithal, with the guidance and leadership of the UPU, to seize the opportunities that are available to grow both the markets and the postal

business, by overcoming barriers and aligning postal services and operations to the needs of customers, and to get on the optimistic track of returning to a 2% to 4% annual volume growth.

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