Electronic Communications Market Review April 2005 – September 2005

Malta Communications Authority
"Il-Piazzetta" Suite 43/44, Tower Road, Sliema SLM 16, MALTA
Telephone: +356 21 336 840
Fax: +356 21 336 846
www.mca.org.mt
e-mail: info@mca.org.mt

Malta Communications Authority

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EXECUTIVE SUMMARY

This is the seventh publication of the Malta Communications Authority's (MCA) Electronic Communications Market Review. This report provides a general overview of the industry's performance during the six months ending 30 September 2005, including an analysis of the main trends and developments in the various sectors of the Maltese electronic communications market.

One main development that features for the first time in this report is the preparation of a Price Index for the Electronic Communications Services in Malta.

The index which was developed by MCA in conjunction with NSO, uses a chain-linked mechanism, as opposed to a fixed weighted scheme used in the compilation of the RPI. The former mechanism offers the possibility to include new products when they become relevant in the marketplace and consequently this mechanism was deemed more appropriate to capture the fast moving pace of product innovation characterising the electronic communications industry.

The composition of the index comprises sub-indices, namely: Mobile Telephony, Fixed-Line Telephony, Cable TV, Internet, Voice-Over-IP (VOIP) and TV Licences. Each of these sub-indices starts from 2002 and covers both residential and business rates, wherever this demarcation is applicable. For each sub-index a business and residential series was produced, with each pair being subsequently given internal weights to arrive at the six aggregated series referred to previously.

This report analyses the price movements in electronic communications services as measured by the index. The first part of the analysis considers the price changes that occurred in the individual sub-indices, whereas the second part analyses the overall changes in the index.

The period under review was characterised by the continued steady growth in mobile telephony where subscribers increased by more than 26,400 and mobile traffic increased by around 3.6 million minutes when compared to the same period in 2004. 81% of the Maltese population now own a mobile phone.

SMS traffic has also continued to increase possibly due to increased mobile users and the high price differential between SMS and voice call rates. MMS traffic on the other hand decreased from quarter two to quarter three in 2005. There may be various reasons for this including tariff complexities, cost considerations and the significant special offers that were available in quarter one of 2005.

VOIP traffic increased to nearly 10 million minutes in quarter 3 of 2005 following the introduction of the 1021 and 'Hello' services in July 05.

The downward trend in international call rates stimulated demand which peaked to 20 million minutes in the third quarter of 2005. The make up of the international minutes however is changing with fixed line volumes decreases more than made up by increases in mobile and VOIP.

There was a new entrant in the cable/digital terrestrial television market in July 05. The effect of this development on the market may be better analysed in future reports.

Further growth was registered in terms of overall Internet subscriptions, mainly driven by broadband connections. There were more than 88,000 Internet subscriptions reported at the end of September 2005, a 3% growth year on year. 50% of all Internet connections are broadband. In comparison, in the last market report issued in March 2005 broadband connections made up approximately 46% of the Internet market. This confirms that the shift from dial up Internet to broadband connections is increasing steadily.

In May 2005 MCA assigned access to frequencies to two digital terrestrial television network operators. MCA also published a number of other decisions during the period under consideration specifically decisions relating to quality of service requirements incumbent on Maltapost plc, the specifications for interim numbering portability of both fixed and mobile services, carrier selection for VOIP services and Maltacom's reference unbundling offer.

This market report also includes a comparative analysis of various economic and market indicators underpinning the Maltese electronic communications sector.

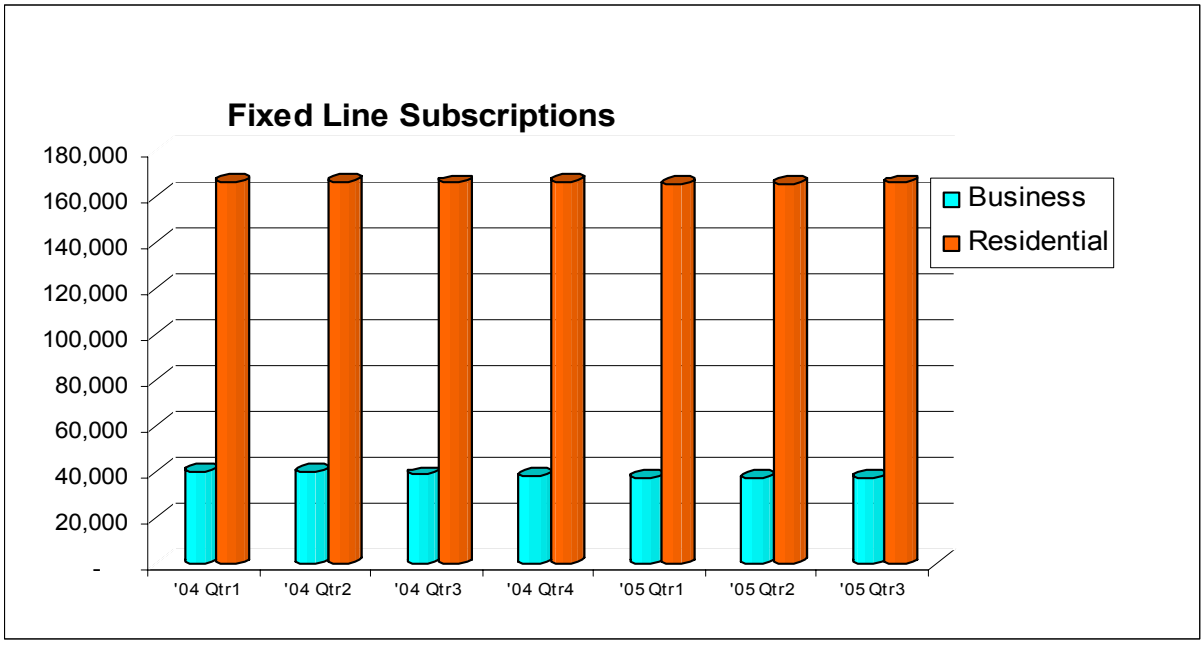
1 THE FIXED LINE MARKET

1.1 Fixed Line Subscriptions

At the end of September 2005 there were 202,932 fixed-line telephony subscribers. This signifies a reduction of 0.9 % when compared with the figure recorded in September 2004. The penetration of fixed line telephony now stands at 51 lines per 100 inhabitants.

The slight decline in fixed line subscribers is mainly attributable to business subscribers that decreased by 1738 when compared to the previous comparable quarter. One of the reasons that may be contributing to this fact is the increase in the usage of ISDN. Residential subscribers decreased minimally during the same period.

The following chart shows the split between residential and business subscribers. In September 2005 18% of fixed line subscribers are classified as business lines with the rest being residential.

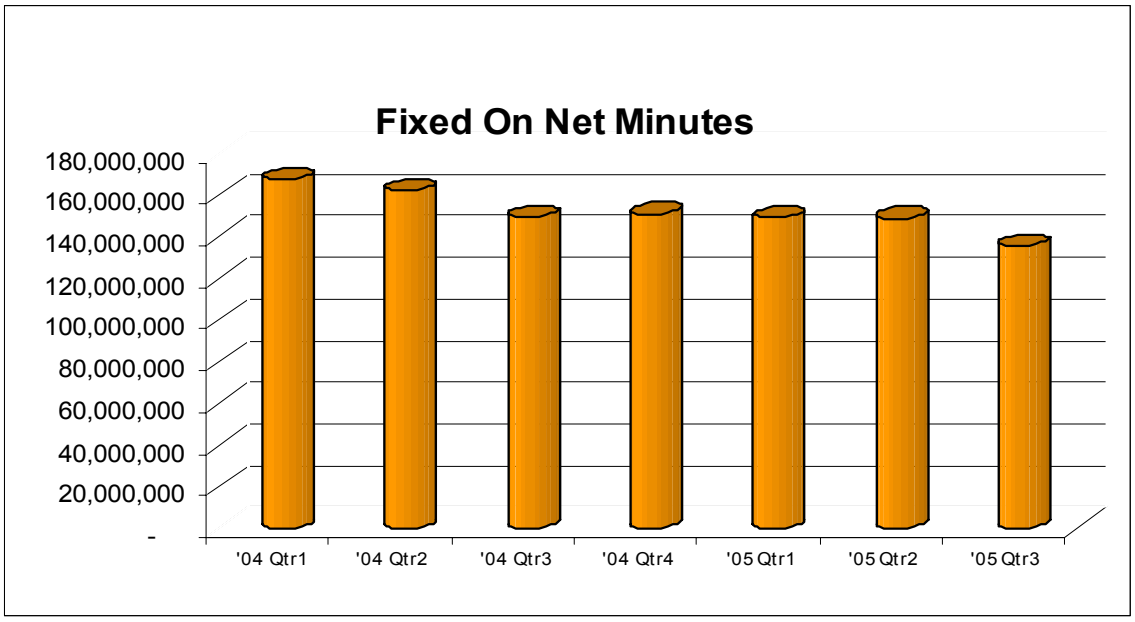


1.2 Fixed Line Telephony Traffic

1.2.1 Fixed line outgoing traffic terminating on the same network

The chart below reflects fixed line traffic minutes originating and terminating on Maltacom's own network for the period under review.

The downward trend in fixed line minutes has continued and is shown in the chart below. There was a drop of 14 million minutes between September 2004 and September 2005. This 9% reduction may be attributable to the trend in fixed to mobile substitution, reduced fixed line usage as a result of the increase in cost of local calls during off peak hours (i.e. after 18.00 hrs), the VoIP alternative and the introduction of another fixed line operator.

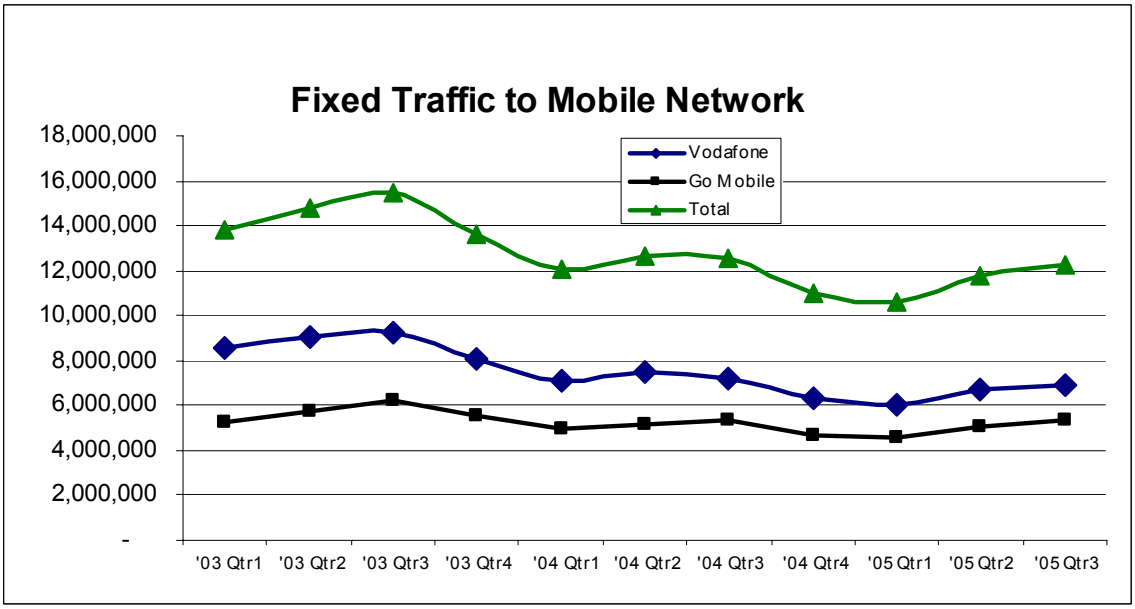


1.2.2 Fixed line outgoing traffic terminating on mobile networks

The shift from fixed-line to mobile communications can be pegged against the continued take up of mobile subscriptions. In fact the mobile penetration rate in Malta, which currently stands at 81%, results in increased usage of mobile as opposed to that of fixed lines.

Seasonal patterns have continued during 2005.

In Dec 2004, termination rates on mobile networks from fixed lines decreased. This has not resulted in material positive increases in volumes.

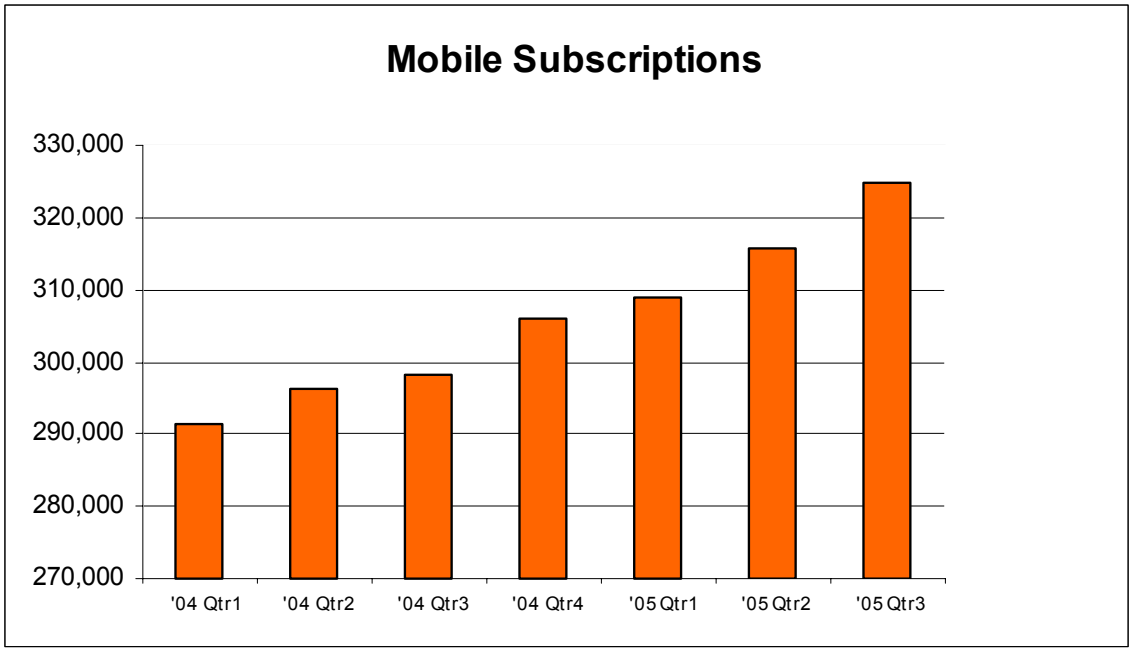


2 THE MOBILE MARKET

2.1 Mobile Telephony Subscribers

As at September 2005 there were 324,763 *active* (only subscribers that have been active during the previous 90 days are included in this figure) mobile subscriptions in Malta. This means that Malta has a mobile penetration rate of 81%.

This figure represents an increase of over 26,400 (equivalent to 8.9%) subscriptions since September 2004.

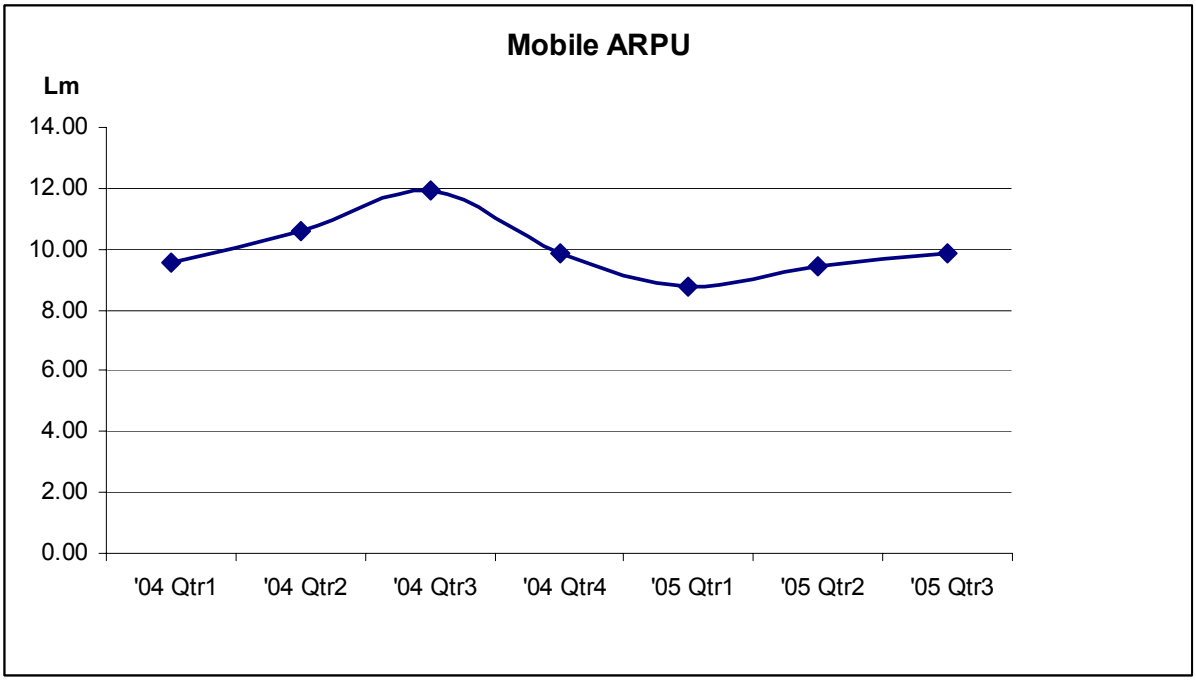


2.2 Average Revenue Per User

The chart below shows the monthly weighted average revenue per user (ARPU) in the local mobile market. This indicator represents the average amount of revenue generated by a local mobile subscriber for a network over a one-month period.

The ARPU includes revenues generated from outbound and inbound traffic and roaming revenues for local subscribers but exclude the revenues generated by the local operators from foreign visitors to Malta.

The ARPU figures traditionally follow a seasonal pattern. This is evident when analysing the summer periods where the amount spent on mobile services is usually somewhat higher than other periods during the year. However, as can be seen below the ARPU figure in the quarter ended September 2005 decreased by 17% when compared to the same quarter in 2004. This may be partly due to the increase in the local subscriber base (new subscribers) spending less and pushing down the ARPU figure.



2.3 Outgoing Mobile Traffic

The graph below illustrates the total number of minutes generated by mobile subscribers during the period under review. It shows the outgoing mobile traffic towards mobile and fixed networks.

The seasonal trends can be clearly observed. However the continued increase in mobile minutes is also evident. In fact during quarter 3 of 2005 mobile to mobile traffic increased by 11% when compared to the same period in 2004. This translates into an increase of over 3.6 million minutes. This continued growth confirms the preference for mobile as the main means of communication.

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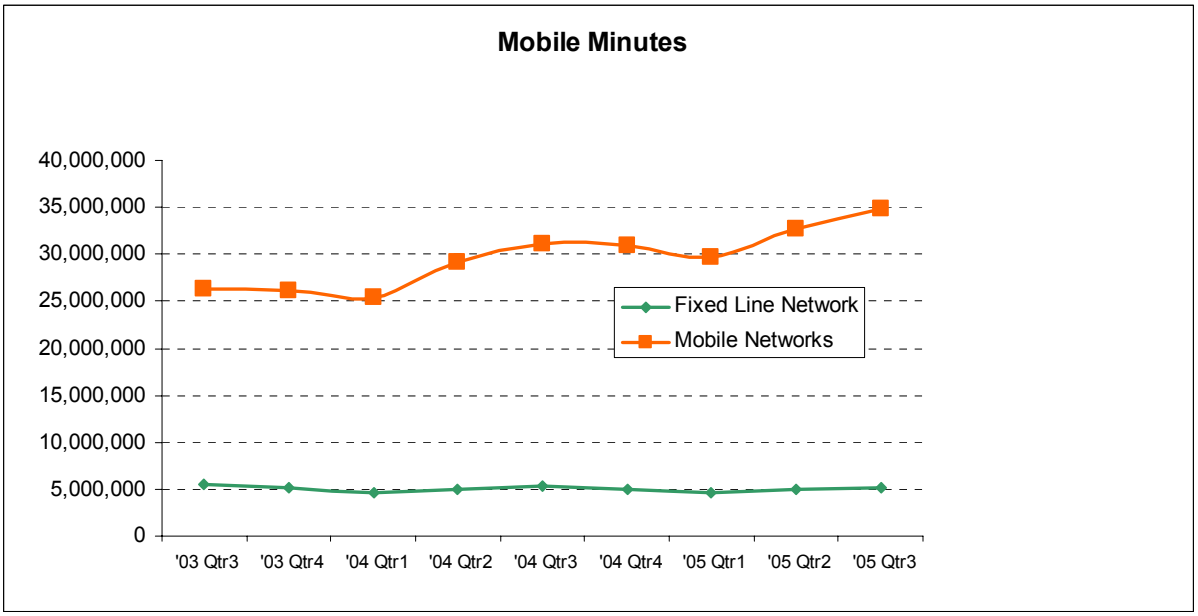

2.4 SMS Traffic

SMS traffic volumes have continued their upward trend. As can be seen in the graph below, SMS usage has not abated and in fact grew by 9 million messages, or 9.4%, between quarter 3 of 2004 and the same quarter in 2005.

The increase in SMS traffic may also be attributable to the increase in the number of mobile subscribers that increased by 8.9% from quarter three in 2004 to quarter three in 2005. Another reason for the continued popularity of SMS is the price differential between SMS and a voice call is high.

The last Electronic Communications Market Review carried an analysis of SMS usage in the EU member states. The main characteristic of the analysis was Malta's status as the highest SMS user in Europe. It is likely that this status has been maintained.

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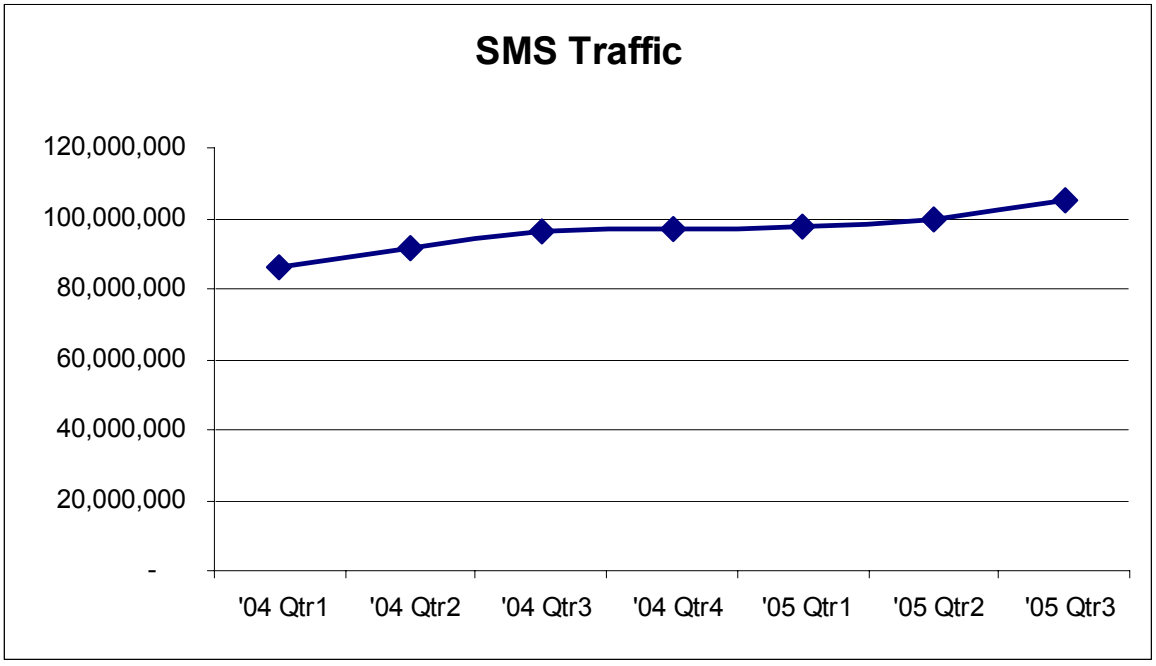
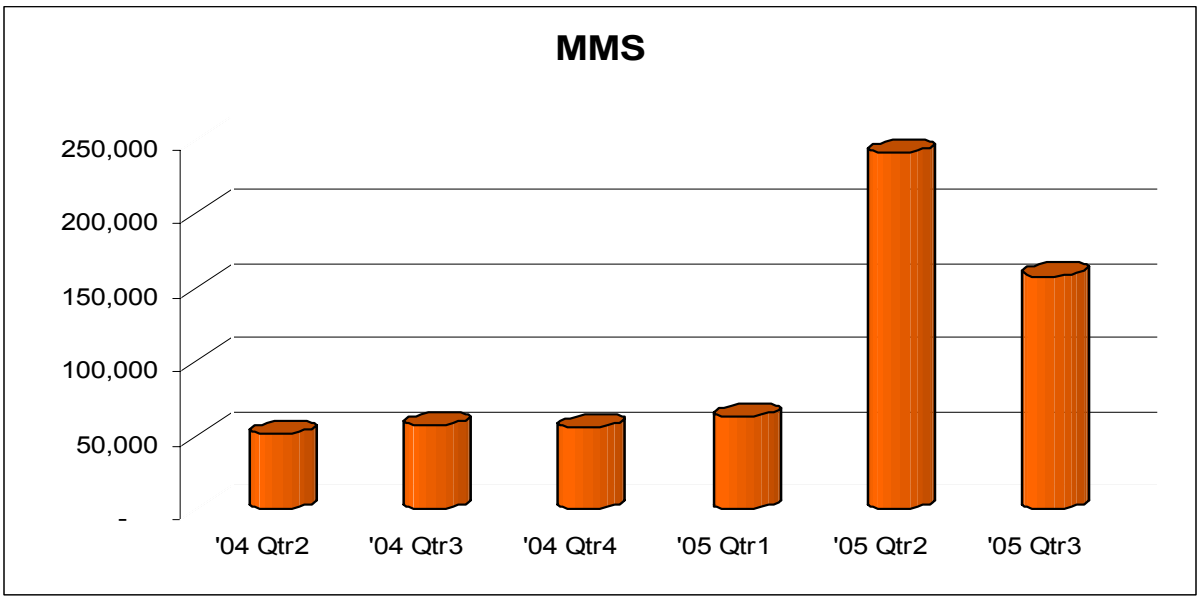


2.5 Multi Media Messaging

Multi Media Messaging refers to the transmission of messages containing text, graphics, photographic images, audio and video clips between mobile devices.

MMS was introduced in Malta towards the end of 2002. The service was free of charge until March of 2004. However, when considering the number of MMS enabled handsets that are currently in use, MMS traffic is on the low side. This could be due to a number of factors including tariff complexities, cost considerations and the actual experience of sending, or need to send, an MMS. Another reason could be the lack of knowledge and experience in the use of handsets capable of receiving an MMS.

In March 2005 an agreement was reached between both local mobile networks that allowed subscribers to send MMS across networks, furthermore during that quarter one of the operators was giving special free offers to promote MMS. As a result of these factors there was a significant increase in MMS traffic in quarter 2 which peaked to 241,538 MMS's. The volume however decreased in the subsequent quarter as indicated in the graph below. This movement indicates that facilitation of traffic between networks had a positive effect on volumes.



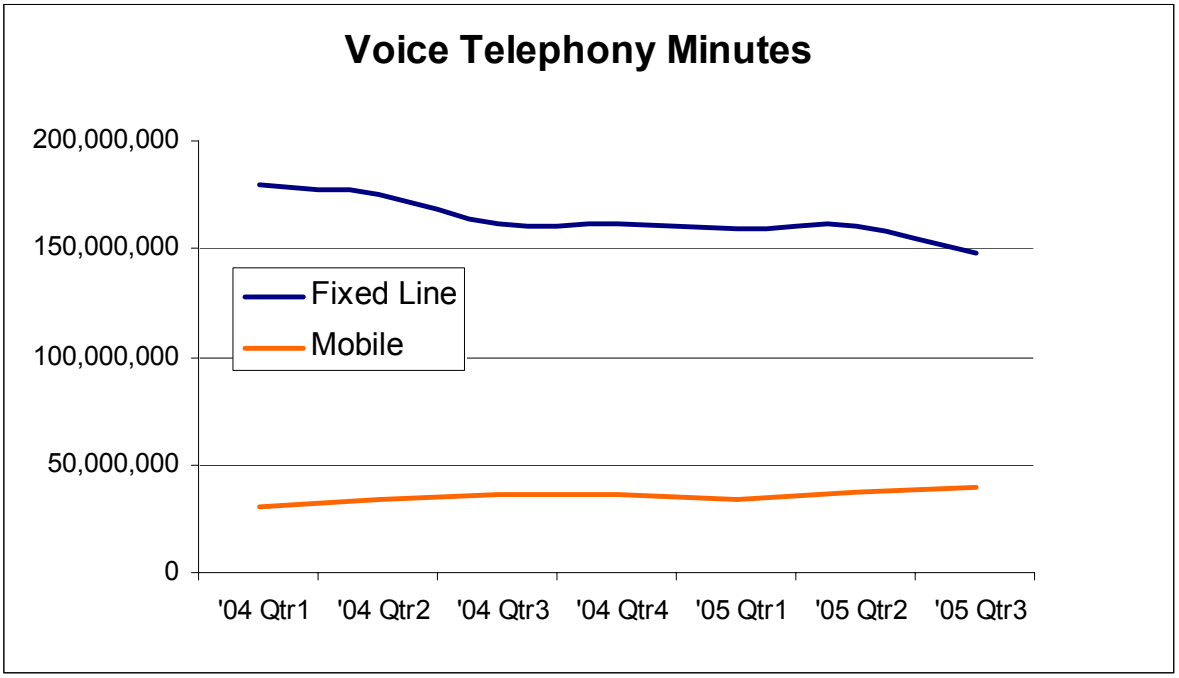
3 VOICE TELEPHONY MARKET

3.1 Local Voice Telephony Traffic

The illustration below shows the total volume of local voice minutes (both fixed and mobile). The decline in the usage of fixed-to-fixed-line telephony is evident. Nevertheless, it still remains the most highly used form of communication in terms of absolute volume of minutes consumed with nearly 148 million minutes in quarter 3 of this year. There is however a decline of 14 million minutes equivalent to 9% in fixed line to fixed line traffic over the comparable quarter in 2004.

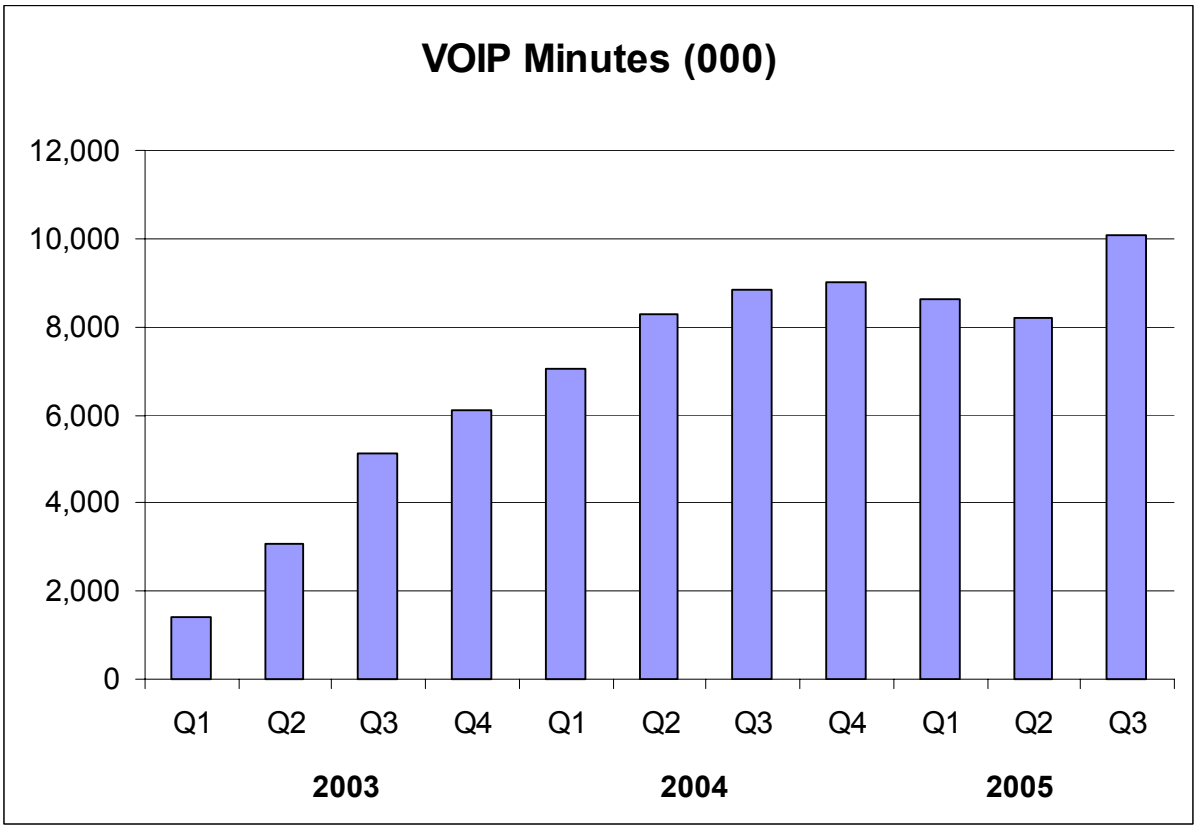
By comparison, during the same time span, mobile-to-mobile traffic rose to nearly 40 million minutes. This represents an increase of 3.6 million minutes or nearly 10% over the comparable quarter in 2004.

The decline in the fixed line voice minutes of 14 million is much sharper than the increase in mobile voice minutes of 8 million during the twelve month period October 04 to September 05. Reasons for this may include the substitution of fixed calls with SMS and shorter mobile voice call duration.



3.2 Voice over Internet Protocol (VoIP)

In July 05 the 1021 and 'Hello' services were introduced, this has resulted in an overall increase in VoIP minutes in quarter 3.

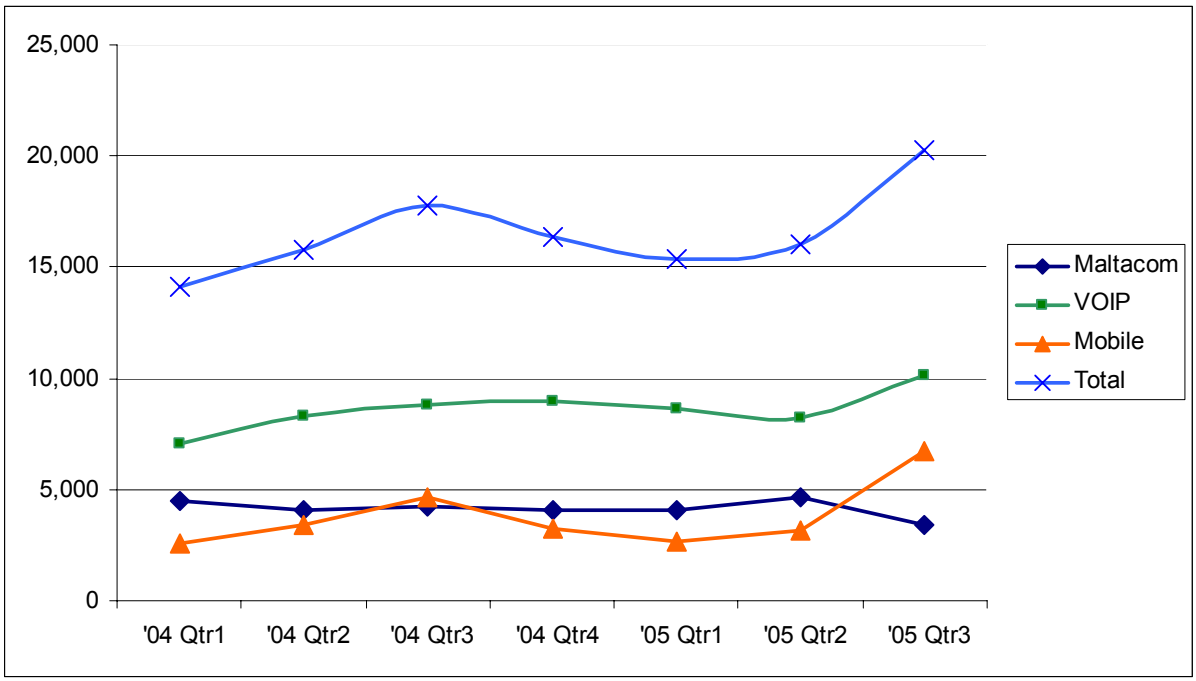


3.3 International Minutes

Total international outgoing minutes increased by 13.8% when quarter 3 of 2005 is compared to the same period in 2004. VoIP traffic (including the 1021 service) increased by 14.2% whilst mobile minutes increased by 43%. Fixed line volumes decreased by 19%.

The downward trend in international tariffs has stimulated demand. In fact overall international minutes peaked to more than 20 million minutes in quarter three of 2005.

Mobile international minutes – which include also the traffic originated by visitors to Malta - peaked in the summer months when Malta has the highest number of tourists..

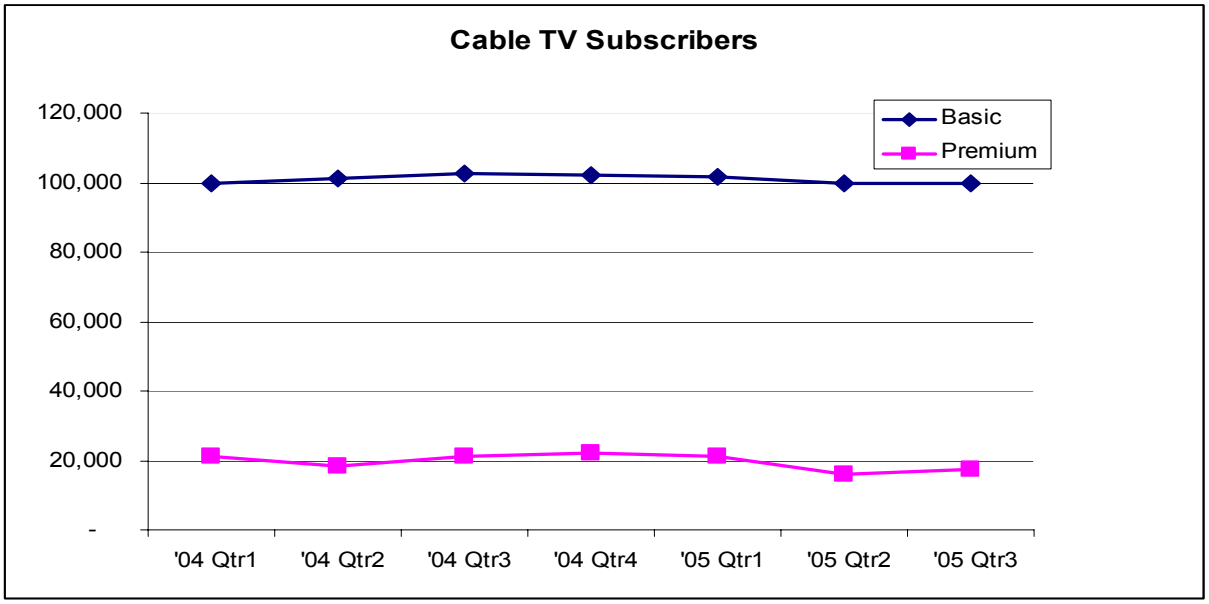


4 THE CABLE TELEVISION MARKET

4.1 Cable Television Subscribers

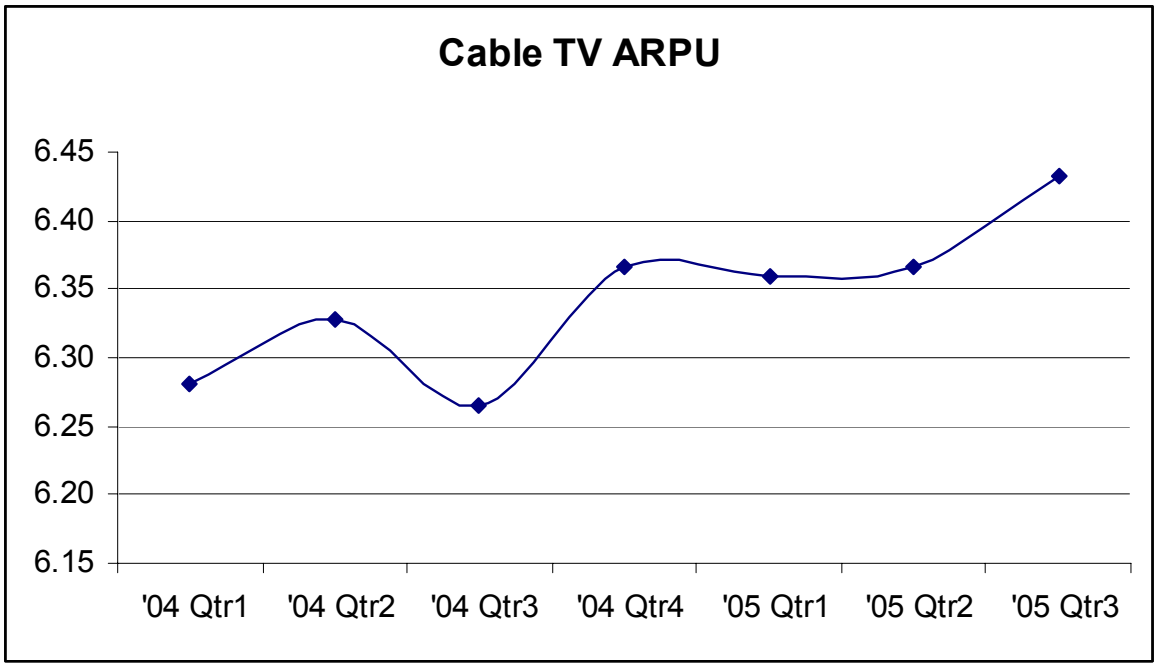
Melita Cable plc launched its Digital service in February of this year. At the end of September 2005, there were 99,917 cable television subscribers, both Analogue and Digital. 17,607 of those subscribers had a Premium subscription. When compared to September 2004, Cable TV subscriptions decreased by 2.5%, whilst premium subscriptions decreased by 17%.

There was a new entrant to this market in July 05 and this may have contributed to the slight downward trend in subscribers. A better analysis of would be afforded in the next review.



4.2 Cable Television Average Revenue Per Subscriber

The graph below shows the average quarterly amount spent per subscriber on cable television services for the past year. An increase of 2.56% in ARPU can be observed in quarter 3 of 2005 when compared to the same period last year.

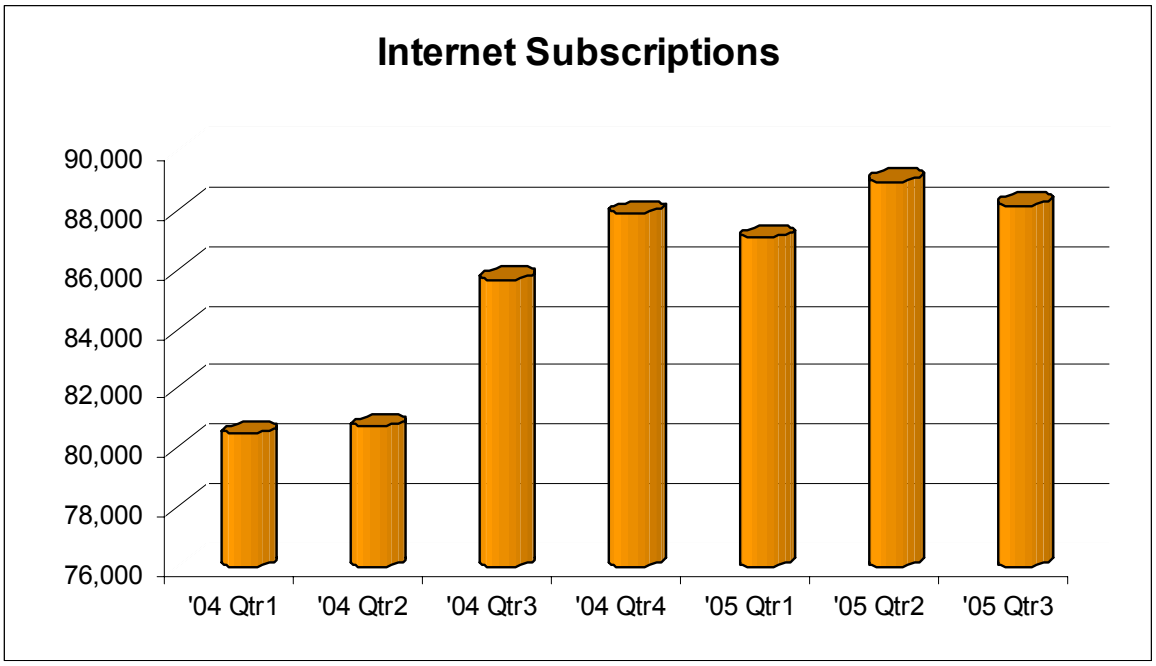


5 INTERNET

5.1 Internet Subscriptions

At the end of September 2005, the total number of Internet subscriptions, both broadband and narrowband, amounted to 88,145 - up by 2,473 subscribers or 3% since September of 2004. This translates to 22 subscriptions per 100 inhabitants.

The graph below shows that between quarter 4 of 2004 and quarter 3 of 2005 there were minimal changes in total Internet subscriptions.

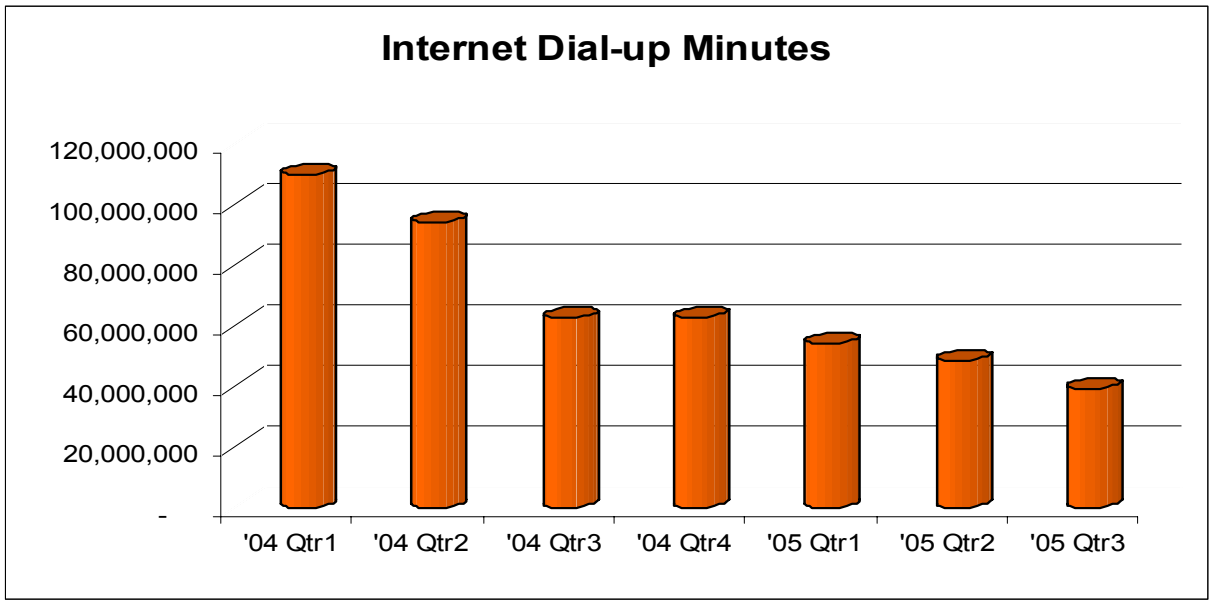


5.2 Internet Traffic - Dial-Up

The graph below shows the number of fixed line minutes used by subscribers to access Internet services. There is evidently a drastic decrease in the volume of Internet minutes. Quarter 3 of 2005 experienced a downward trajectory of 37% in Internet traffic minutes when compared to the same period in 2004. The primary reasons for this decline are mainly twofold:

1 - Tariff rebalancing in fixed-telephony, which resulted in the duration of a pulse being reduced to 30 minutes, from an unlimited duration after 18:00 hrs. This came into effect in June 2004.

2 - Continued proliferation of broadband services during the period under review effectively meant that 'heavy internet users' are migrating to the more efficient, and now cost effective solution, from the traditional dial-up method of accessing the Internet to broadband. This steady shift subsequently led to the considerable reduction in Internet minutes shown in the graph below.



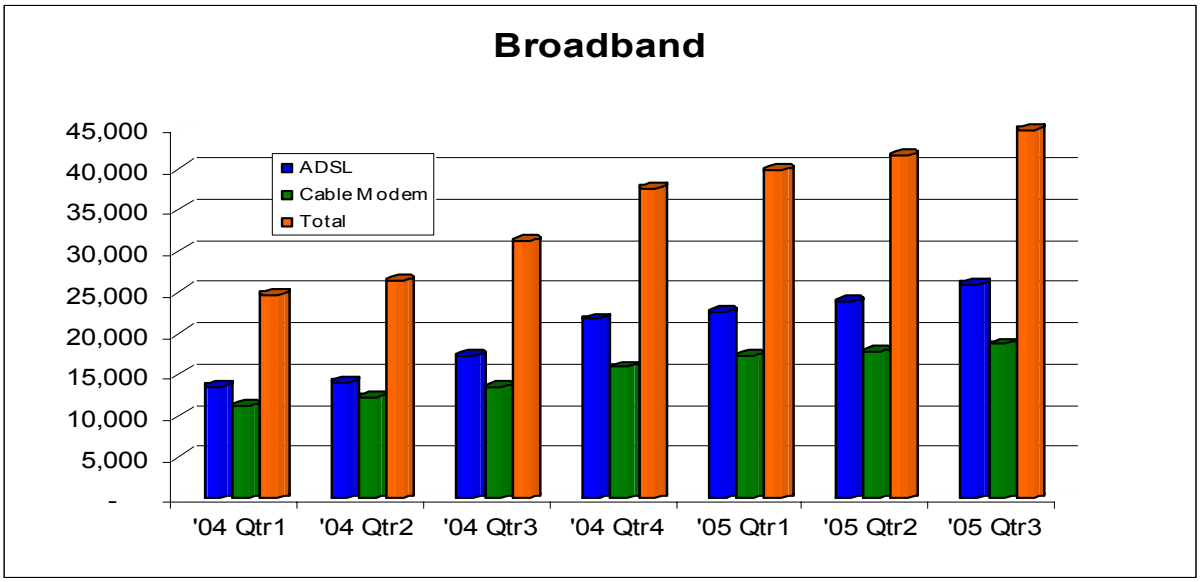
5.3 Broadband Internet

Broadband connections have continued to grow, a trend emphasised in the graph below. In fact a 43% increase was registered since quarter 3 of 2004 with more than 13,500 new connections.

As stated in the last publication of this report the demand for such services escalated partially due to the increase in the cost of dial up connections as a result of the Maltacom tariff rebalancing exercise. This coupled with increased marketing by the transport providers and sizeable discounts on upfront costs for installation and modems, have steered broadband to the current levels of penetration.

The Prepaid Broadband packages introduced in mid 2004 and the increased bandwidth offering to subscribers later on in the year have unquestionably also encouraged Internet users to install a broadband connection.

In fact total broadband connections have increased by 28,592 or 178% from the period 1 January 2003 to September 2005.

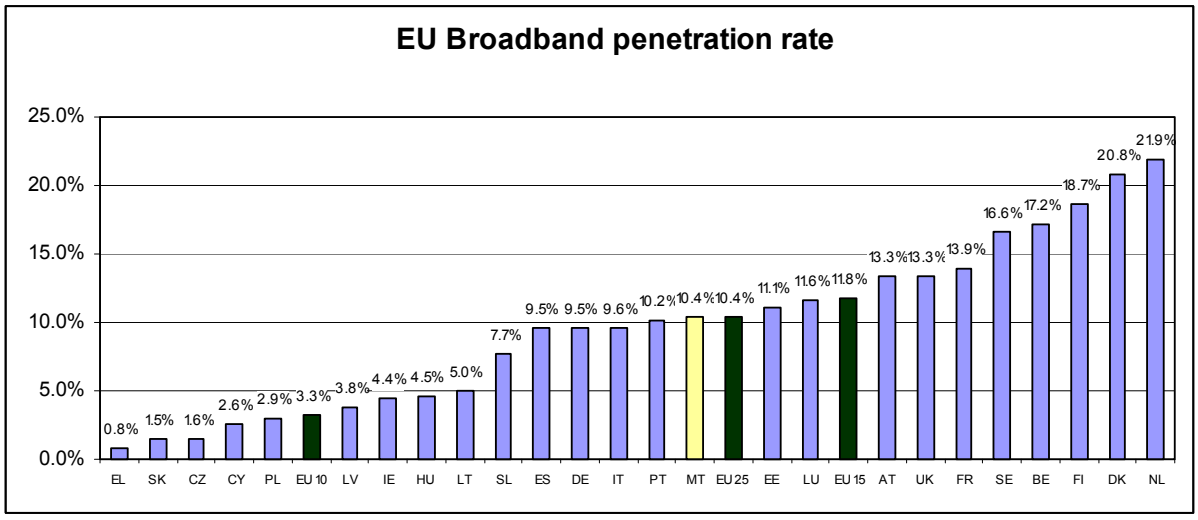


6 EUROPEAN TRENDS

6.1 EU Broadband Penetration

The illustration below shows the number of broadband connections per population in the EU member states as at June 2005. The emphasis on Broadband growth is definitely high on the agenda of every EU member state.

It is encouraging to see that Malta is at the same level as the average penetration within the EU and significantly higher the new EU entrants as the average rate for the new entrant stands at 3%.



Source :ECTA

Broadband Internet access can be provided by different means: digital subscriber line (DSL), wireless local loop (WLL), cable TV access (cable modem), dedicated leased lines and other access technologies (satellite, optical fibre, powerline communications). DSL has increased its importance as the predominant technology and now represents almost 80% of all EU broadband lines, with cable modem accounting for most of the balance.

The number of broadband connections in the EU is now over 45 million.

7. A PRICE INDEX FOR ELECTRONIC COMMUNICATION SERVICES IN MALTA[1]

7.1 Introduction

Price movements in an economy are statistically summarised by a price index. Amongst the most widely used indices is the general retail price index (RPI) or the consumer's price index (CPI), which are both used to measure the overall level of inflation in the economy; as well as producer price indices, which are designed to gauge input-price inflation from a producer's point of view.

In June 2004, the Malta Communications Authority (MCA) and the National Statistics Office (NSO), embarked on a joint project to develop a retail price index dedicated specifically to the electronic communications industry. Although a similar index is already incorporated as a sub-index in the general RPI, its coverage is rather limited. This is because since the general RPI uses a fixed weight methodology (updated every five years) it fails to capture the fast development of certain products such as those offered in electronic communications markets. A consequence of this methodological constraint is the fact that under the current set-up of the Communications sub-index[2], the movement in prices of mobile services are excluded. In the year 2000, which is the base year of the current RPI, mobile telephony services were not representative of the consumption patterns of the average Maltese consumer, and hence they were excluded. However, in the subsequent years to the present day, the introduction of competition, as well as advancements in technology, have resulted in a remarkable increase in mobile subscriptions and lower prices which have made the consumption of mobile services an important component in both consumers' and business' expenditure.

This methodological constraint, which ultimately restricts the present and future coverage of the whole spectrum of electronic communications services, underpinned the need to develop a dedicated index, as opposed to using the readily available series found in the Communications sub-index of the general RPI.

The need for developing this index was motivated also from the various potential uses of such a tool. From a regulatory point of view, such an index will permit the MCA to measure directly the impact of past and future regulatory decisions on electronic communication prices. At the same time, apart from permitting consumers to monitor better the costs of telecommunications services they purchase, such information will also be useful for macro-economic research, as electronic communications price movements are important indicators of the level of technological development in the economy. In addition, it is also expected that the index will be a useful tool for the operators in the industry for strategic and planning purposes.

From a statistical point of view, this index can also be used to refine the current general RPI and Harmonised Index of Consumer Prices (HICP)[3], while some of its components can be incorporated into the Producer Price Index (PPI), which the NSO is currently developing.

[1] The MCA would like to thank the Consumer Prices Section of the NSO who were crucial for the compilation of this index, and Mr. A Camilleri, Director General of the NSO, for his support throughout the compilation process.

[2] The Communications sub-index incorporates amongst others, the movement in electronic communications prices within the RPI

[3] The HICP is an index of consumer or retail prices that uses consistent methodology across all the member states of the European Union.

7.2 Methodological Overview of the Index

The index uses a chain-linked mechanism, as opposed to a fixed weighted scheme. A fixed weighted scheme only allows the composition of the products within the reference basket to be changed at fixed intervals, such as the five-year period used for the general RPI. On the other hand, the chain-linked mechanism offers the possibility to include new products when they become relevant in the marketplace. For this reason, a chain linked index was deemed more appropriate to capture the fast moving pace of product innovation characterising the electronic communications industry.

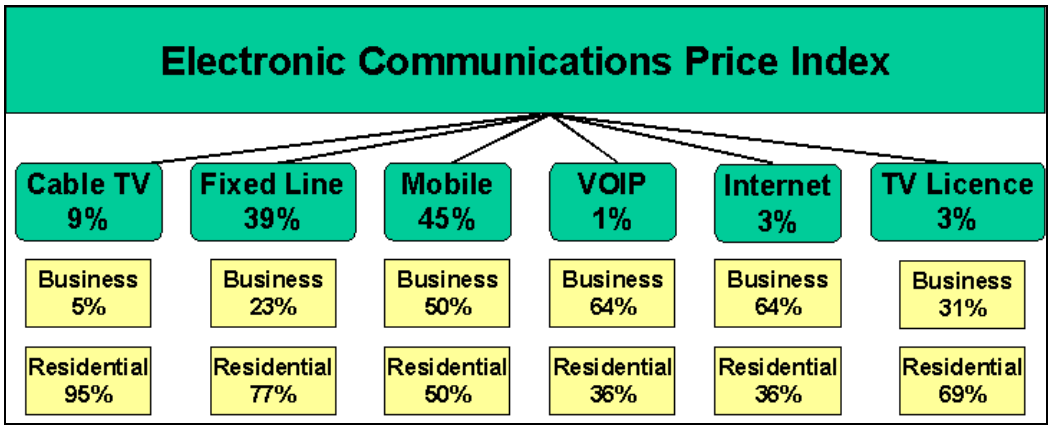
The composition of the index comprises six monthly sub-indices, namely:

1. Mobile Telephony sub-index
2. Fixed-Line Telephony sub-index
3. Cable TV sub-index
4. Internet sub-index
5. Voice-Over-IP (VOIP) sub-index
6. TV Licences sub-index

Each of these sub-indices starts from 2002 and covers both residential and business rates, wherever this demarcation is applicable. Thus, for each sub-index a business and residential series is produced, with each pair being subsequently given internal weights to arrive at the six aggregated series mentioned above. These internal weights were constructed on the proportions of expenditure from business and residential units on the services featured in each sub-index. Data for these weights was obtained from the annual consumption surveys conducted by the National Accounts Office of the NSO for the compilation of Gross Domestic Product (GDP). Wherever the demarcation between business and residential expenditure was not readily discernable, assumptions on the internal weights had to be made. Further details on these assumptions and the composition of each sub-index are given in the next section.

Using the same survey data, these sub-indices are subsequently given overall weights based on the average split in consumption on the different electronic communications services comprised in the abovementioned sub-indices for the period 2002-2004.

A schematic diagram of the composition of the overall index, together with overall and internal weights is shown hereunder



7.3 Methodology of Individual Sub-indices

7.3.1 Mobile sub-index

This sub-index is comprised of a business and a residential category. Given the nature of the mobile market in Malta, a clear demarcation between the former and the latter is not easily discernable as there is no accurate information on the split-up of business and residential users who make use of pre-paid services. This is partially attributable to the fact that it is not obligatory to register details when purchasing a SIM card. Furthermore, there might be a considerable portion of the population who uses a residential mobile subscription also for business transactions. Self-employed persons are a clear example of this characteristic. For these reasons, in the absence of more accurate data, the overall mobile sub-index is constructed by attributing a symmetric weight (50:50) to the price series of the business and residential categories.

Both of these categories comprise the services offered in the local market, namely mobile calls, SMS, MMS and WAP/GPRS. In the case of mobile calls, each of the two categories are split between post-paid and pre-paid tariffs, using the traffic minutes originating from these two subscription schemes. With regards to pre-paid mobile calls, a distinction is made between standard subscriptions and the special pre-paid schemes offered by the two mobile operators, such as Vodafone's 'Family and Friends' and Go mobile's 'Go Club'. The pricing of pre-paid services is based on the average per-minute peak and off-peak rates, which are in turn weighted by the traffic distribution recorded during these time-bands. Since there is no distinction between business and residential pre-paid tariff plans, the demarcation of prices for the residential and business categories of the overall sub-index is influenced solely by the assumptions taken to weigh the standard and special schemes together. For example, the underpinning assumptions feature a higher weight for the special schemes in the residential category, reflecting the fact that more residential customers opt for this type of tariff plan as opposed to 'business' customers who are assumed to make use more of the standard pre-paid schemes.

The price movements of post-paid tariff plans take into account the monthly rental and the average of post-paid minutes per month, using the most representative plans offered by the two mobile operators. Since these tariff plans contain a bundle of free minutes, these are subtracted from the average consumption of minutes per month to arrive at the actual effective monthly spend.

The same methodology is used for the SMS sub-category, with the price per SMS substituting the per-minute rate used for mobile calls.

The price per megabyte of both the WAP and the GPRS service is weighted individually according to the usage volumes recorded on the two mobile networks. To get to an overall price of WAP/GPRS services, the price movements of both services are weighted further by their relative importance in terms of overall usage. On the other hand, the pricing of MMS services is monitored per event, using the average rate prevailing in the market for this service.

To arrive at the overall price index in each category (business and residential), the individual series by service were weighted by revenue. However these weights were modified further by a number of assumptions to reflect the different usage patterns of business and residential subscribers. As an example one can mention the modification of the weights with respect to the relative importance of calls and SMS usage within each category. In this respect a bigger weight was given to calls in the business category, in relation to the weight featured in the residential subscribers. This was done so as to reflect a higher relative importance of mobile calls for a business subscriber.

7.3.2 Fixed-Telephony sub-index

Both the residential and business categories cover local calls, international calls and calls to mobile (local and international).

The residential category is constructed on the methodology used by the NSO for the RPI, which basically tracks five different reference bills ranging in size from a one-person to a five-person household. In the Household Budgetary Survey of the NSO for 2000, it was found that each particular household profile consumes a total of 136, 156, 204, 224 and 242 pulses on local calls. These pulses are subsequently segmented into the different time-of-day periods to mirror the time-based charging schedule of the fixed line operator. However, it should be noted that the latter segmentation is kept constant for each household profile, thus assuming that each profile has the same calling pattern. The line rental and the local calls portions (including the free pulses) were added together and given an internal weight of 94%, with the remaining 6% being divided among the international calls (1.95%) and the local and international fixed-to-mobile calls (3.77% and 0.14% respectively). These internal weights were based on the number of minutes[4] consumed by subscribers on these services.

To construct the internal weighting scheme of the business category, the NSO conducted an *ad hoc* survey on the fixed-telephony bills of 20 randomly selected businesses, as data on consumption in this category was not readily available. Basing on this survey, the services within this category were given the following internal weights; 24.3% for line rental, 50.9% for fixed-to-fixed calls, 9.9% for international calls, and 13.7% and 1.2% for local and international fixed-to-mobile calls respectively.

Furthermore, the installation fees and the 'easyline' service where excluded from both business and residential categories. The former was excluded since it is a one-off payment, whilst the latter was left out as, although this service is growing in popularity, it was still deemed not be sufficiently representative. However, as explained earlier, the chain-linked mechanism of the index permits the inclusion of this service whenever it is deemed fit to do so.

7.3.3 Cable TV sub-index

The residential side of this sub-index uses different levels of television services on offer by the cable operator. These include the reception, entry, basic and family packages, each of which containing the applicable connection charge and monthly fee. Since the connection fee is a one-off charge, it is given a weight of 2%, with the remaining 98% attributable to the monthly fee. Furthermore, to cater for the additional services of the sports and movies channels, the basic and family packages are qualified in the following variants:

1. Basic package only
2. Basic package with sport channel
3. Family package
4. Family package with sport channel
5. Family package with movie channel

Although other combinations of service are available, the above variations were deemed sufficient in giving a fair picture of the price movements in the provision of cable television services. These individual sub-classifications are subsequently weighted by subscriber-based internal weights, so as to aggregate them into the basic and family sub-indices mentioned earlier.

[4] This data was extracted from the quarterly data submissions that the MCA collects from the fixed-line operator

Since actual data on the number of subscribers fitting into the above classifications was not available, assumptions had to be made to construct the aforementioned internal weights. The basic with sports sub-category was assumed to be equivalent to 20% of the total sport channel subscriptions[5]. The remaining basic-package subscribers were assumed to consume no other additional service. On the other hand, the sub-category of the family package with sports channel was assumed to be equivalent to the remaining 80% of the total sports channel subscription, while that of the family package with the movie channel was assumed equivalent to the total number of movie channel subscriptions. The latter implicitly assumes that all the movie subscriptions pertain to the family package subscriber base. Given the above assumptions, the standard family package subscribers are left as a residual from the total family package subscribers that do not receive either the movie or the sport channel.

In conclusion, so as to arrive at the overall Cable TV sub-index, the four main categories comprising the reception, entry, basic and family tiers were weighted further by the total number of respective subscriptions.

As for the business category, this is left to move one for one with its residential counterpart. This is because business rates in this market are set at a discount or a premium on the standard residential rates depending on size, occupancy and other commercial factors. For this reason, whenever standard rates change, it is being assumed that business rates move along with them. From a purely operational perspective, the number of business subscribers are derived by dividing total revenue from business outlets by the standard residential rate to arrive at the basic unit equivalence.

7.3.4 Internet

Both residential and business categories are split into dial up and broadband services. Within these classifications, each category uses the prices of the various dial-up and broadband packages quoted on the respective websites of the five major Internet Service Providers (ISPs)[6], which in turn account for more than 70% of total internet turnover.

The various packages on offer by each ISP falling under the same service level (dial-up or broadband) were given a series of equal internal weights. In other words if four dial-up packages are offered by a particular ISP, each package was given a weight of 25%. After applying the same methodology to all ISPs surveyed, another weighting scheme based on the revenue levels of each company[7] is used to aggregate all the dial-up and broadband services of each company into two individual price series.

Furthermore, a constant overall weight of 51.9% and 48.1% is given to the prices of dial-up and broadband service levels respectively, to get to a single overall series for each category (residential and business). These weights are based on the total subscribers' split between dial-up and broadband subscriptions.

To get to the overall Internet sub-index, the business and residential categories are finally weighted by expenditure, as explained in the previous section.

[5] Actual data on the number of total subscribers receiving the Entry, Reception, Basic and Family tiers, together with the total number of sport and movie channel subscriptions is supplied every quarter to the MCA by the cable operator. For the construction of the index 2004 data was used.
[6] These ISPS are Euroweb, Maltanet, Onvol, Keyworld, Waldonet.
[7] This data was extracted from the quarterly submissions that the MCA collects from each ISP, which amongst other information contains revenues and the number of subscribers of each company

7.3.5 VOIP sub-index

Although VOIP services started towards the end of 2002, for practical reasons, they were incorporated in the index from January of the same year. The methodology used for this sub-index is very similar to that of the Internet sub-index. Indeed the rates for this sub-index were collected from the websites of the three major providers of VOIP services, namely Unitel, OneVoice and Maltanet. To simplify the data collection process, the sub-index focuses on the most popular destinations for these calls, rather then surveying the whole price range. Basing on the information that the MCA collects from fixed-line operator, call rates for the UK, Italy, Australia, Germany, USA, Libya and France were collected. Together, these destinations account for more than 60% of the total international outgoing traffic. This information was also used to compute a weighted average tariff, based on the relative importance of each destination.

Whenever more than one rate was found, it was assumed that the lowest rate is used by businesses, while the standard rates are used by residential customers. Subsequently, to obtain a single series for each of the two categories, the 'residential' and 'business' rates of all the service providers were weighted by the relative importance of each company in terms of generated traffic. Finally the 'business' and 'residential' categories where aggregated using the same weights featured in the Internet sub-index (64:36 for Business and Residential subscribers respectively), since no actual data on such consumption patterns was available.

7.3.6 TV License sub-index

This sub-index tracks the charges for a TV licence, which is the same for residential and business purposes.

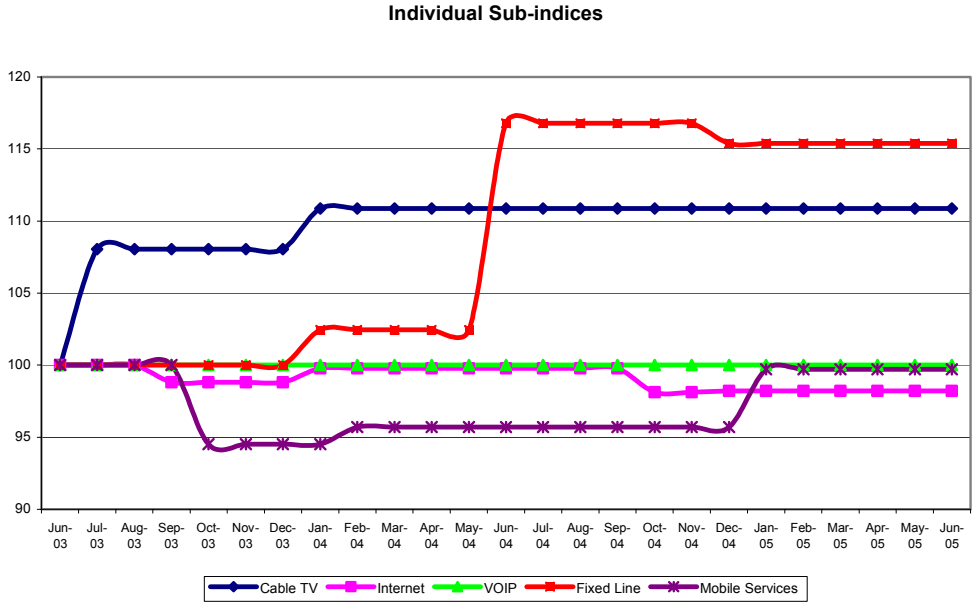
7.4 Movements in Electronic Communications Prices 2002-2004

This section analyses the price movements in electronic communications services as measured by the index. The first part looks at the price changes that occurred in the individual sub-indices, followed by another section which analyses the overall changes in the index. A time series of the individual sub-indices together with the overall electronic communications index can be found in an appendix to this report

7.4.1 Individual sub-indices

Chart 1. depicts graphically the time series of five of the six sub-indices comprising the index. The TV Licenses sub-index is excluded from the chart, as this remained unchanged throughout the period reviewed. At the same time, although technically the index starts from the year 2002, the chart depicts the sub-indices from June 2003 onwards, as prior to this date there were no particular price changes to report.

Chart 1.



As can be seen from the chart, during July 2003, the Cable TV sub-index increased by 8% following upward revisions in the Entry, Reception and Family packages. A further 2.8% increase was recorded in January 2004, reflecting an increase of 3 percentage points in the local VAT rate. These price changes caused the sub-index to increase to 110.87 by the end of 2004, equivalent to an overall increase of almost 11% in cable TV prices.

The Internet sub-index shows only marginal changes throughout the reviewed period. In September 2003, it recorded a drop of 1.2% as a major ISP decreased the prices of its broadband services. This drop was subsequently neutralised, as in January 2004 some of the ISPs surveyed increased their prices in line with the VAT rate increase explained earlier. During October of the same year, broadband prices declined again, causing the index to finish 2004 at 98.2

The prices for VOIP services remained unchanged, hence the flat line for this sub-index in the chart.

On the other hand, the increase in VAT cause the Fixed-line sub-index to edge up by almost 3%, before increasing by a further 14.3% on account of the tariff rebalancing exercise that took place in June 2004. This rebalancing affected various components of the fixed-line sub-index, as it included the removal of 60 of the 100 bi-monthly free pulses for the residential subscribers, an increase in the residential and business line rental and higher implicit dial-up internet charges following the shift towards a 30-minute pulse rate from the previous unlimited duration during the night and weekend tariff. In December, the index edged down slightly, as the fixed-telephony operator decreased its fixed-to-mobile charges and introduced further reductions in its international rates. Overall, the index finished the year at 115.4, or 15.4% higher then its base year level.

As regards the mobile sub-index, this recorded a drop of 5.5% in October 2003, as one of the mobile operators reduced its SMS rates on both pre- and post-paid services. In February

2004, the marginal increase in the index reflected the fact that one of the operators passed on the increase in the local VAT rate. Since these new prices were introduced during February rather than January, the date when the VAT increase occurred, the increase in this sub-index lagged one month behind the adjustment recorded in the other sub-indices. Since no other price movements were recorded in this sub-index during 2004, it finished the year at 95.7, or 4.3% lower than its January 2003 level. During January 2005, however, this decrease was completely neutralised by the 3% surcharge on mobile services, as well as the fact that other mobile operator passed on the consumer the 3 percentage points increase in the VAT rate, which it had absorbed since January 2004. As can be seen in the chart these fiscal measures caused the mobile sub-index to end June 2005 at 99.72, as they neutralised completely the decrease in SMS prices mentioned earlier.

7.4.2 The Overall Electronic Communications Index

Chart 2

Electronic Communications Index

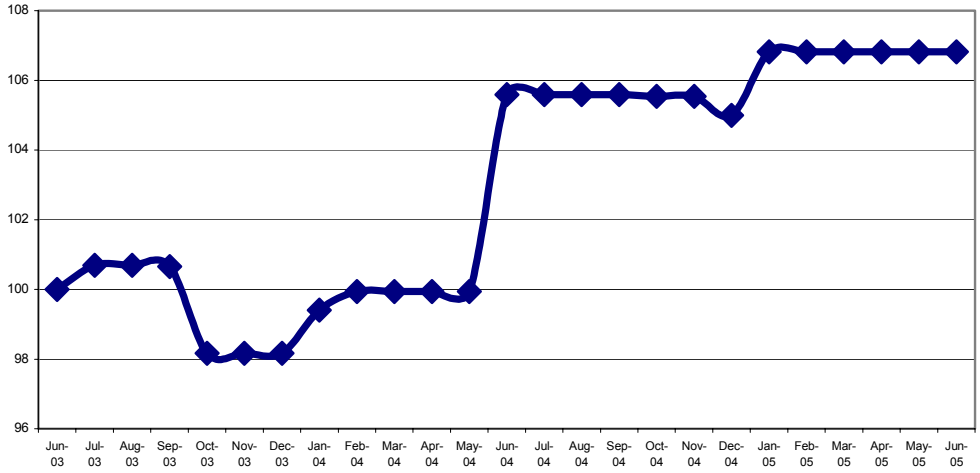


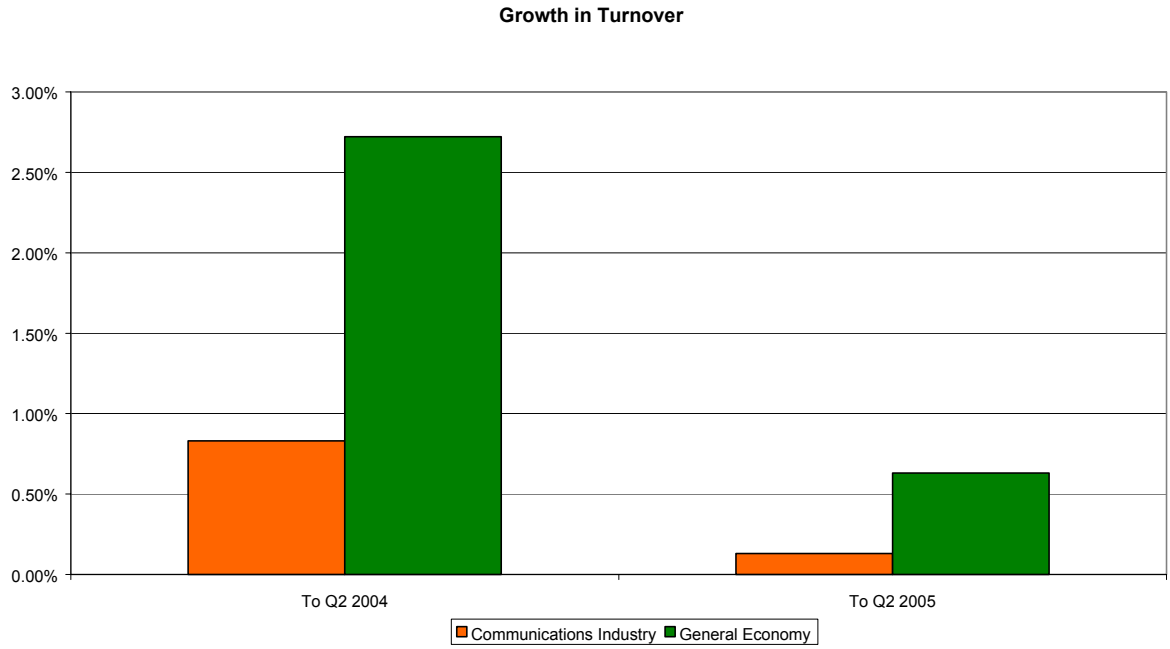
Chart 2. depicts the overall effects of the changes in the individual sub-indices explained earlier. Indeed the index increased by 0.7% in July 2003, on account of the upward adjustments in cable TV rates noted earlier. This was followed by a drop of 2.5% attributable to the noted reductions in SMS rates. In January 2004, the noted drop in the index was completely neutralised due to the VAT rate adjustments in the majority of the electronic services comprised in the index. Furthermore, the fixed-line tariff rebalancing that took place in June 2004 caused an increase of almost 6% in the overall index, while the marginal drop observed in December of that year was attributable to the reductions in fixed-to-mobile and international charges. Overall the electronic communications index ended 2004 at 105, 5% higher than its base level of 2002. At the same time, due to the developments in the mobile market noted earlier, the overall index increased by 1.7% to 106.8 between the end of 2004 and June 2005

8 THE COMMUNICATIONS[8] INDUSTRY IN THE MALTESE ECONOMY

8.1 January-to-June period

As can be seen in Chart 1.1 below, the subdued demand for the whole economy during the first six months of this year affected the output of the communications industry. Indeed the communications industry recorded a marginal growth of 0.13% during the first six months of the year, which fell short of the 0.63% recorded for the whole economy. The limited growth in the communications sector was attributable to a one-off revenue stream recorded by a major firm in the non-electronic sector of the industry. At the same time, the electronic communications sector recorded an overall decline, as the drop in revenues in the more traditional lines of business more than offset the expansions recorded in the rest of the sector.

Chart 1.1

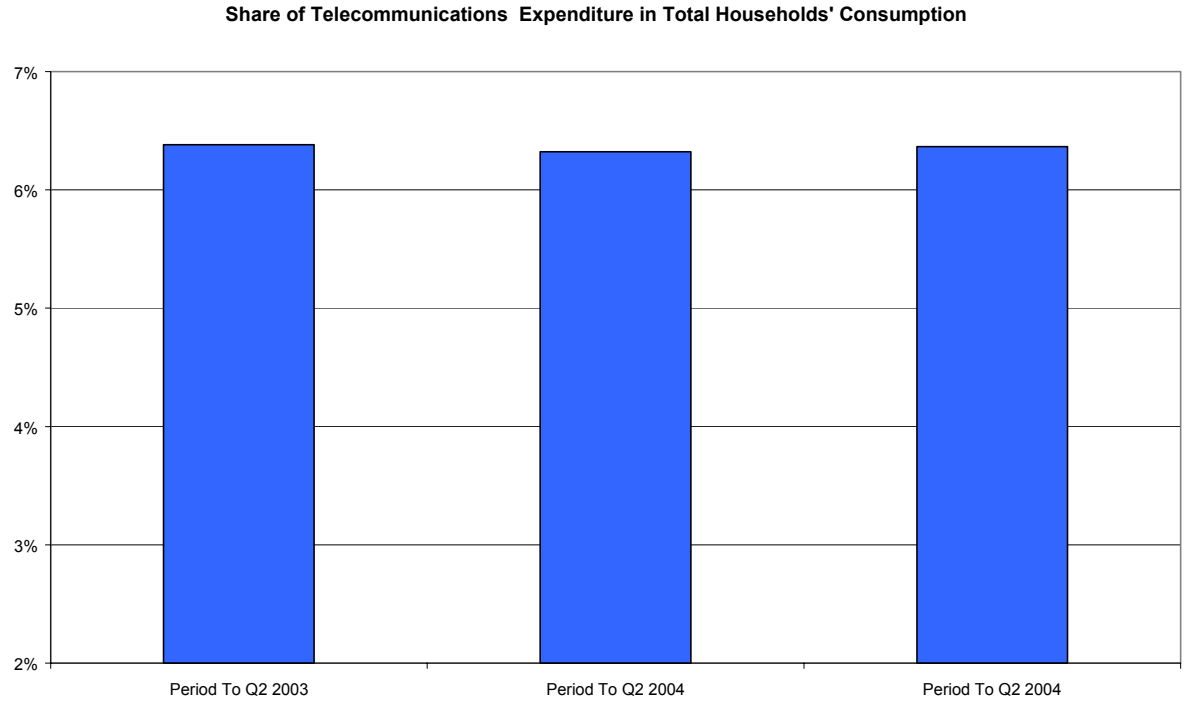


Sources: NSO

[8] The communications industry incorporates posts, courier and telecommunications services.

The subdued overall demand observed during the first six months of the year affected also the expenditure on electronic communications services. In fact, when compared with the corresponding period of 2004, this type of expenditure fell by 1.2% in nominal terms. In real terms, however, the magnitude of this drop was probably higher, as during the first six months of the reviewed year, the prices of mobile-telephony were affected by fiscal measures, such as the 3% surcharge on mobile phone usage. This notwithstanding, as can be seen in Chart 1.2, electronic communications services still constitute a significant portion of household's expenditure, as it remained relatively constant at 6.4%[9] of total household expenditure.

Chart 1.2

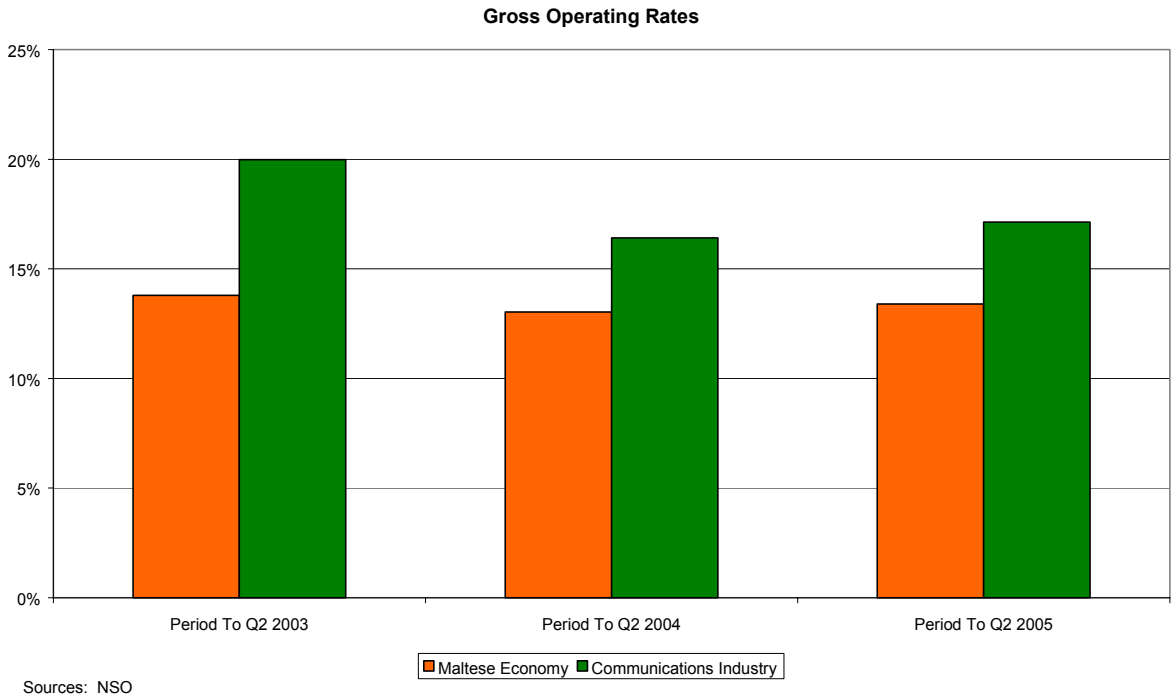


[9] The change in the level of this share in total household consumption from that reported in the previous market review is due to a change in the definition of total consumption. Whereas in the previous report total consumption included also government consumption, in this report, total household consumption incorporates only the total consumption expenditure of households

Market liberalisation in the electronic communications sector also affected the profitability rate of the communications industry. In fact, as can be seen in Chart 1.3, although the gross operating rate[10] (GOR) of the industry remained higher than that of the whole economy throughout the reviewed period, this rate was significantly lower than that recorded for the same period in 2003, as it dropped from 20% in the first six months of 2003, to 17% during the corresponding period of the reviewed year. This was primarily the result of the consolidation in the fixed-line business, which is experiencing higher competition from other, more modern forms of communication. This phenomenon is not unique to the local scenario but it can be observed in other liberalised markets internationally. Indeed, the fixed telephony business has been affected by higher mobile substitution and other alternatives such as Voice over IP (VoIP) and e-mail.

From the chart, however, one can note also a slight recovery in GOR when compared with the January-June period of the previous year. Such a recovery is wholly attributable to higher profits recorded by firms operating in the non-electronic communications sector of the industry, as the profitability rate of its electronic counterpart remained roughly stable. The fact that the GOR for the electronic communications sector remained stable despite the noted drop in revenues mentioned earlier, suggests that firms experiencing this drop in revenues are responding to competitive pressures by rationalising their cost base and thus safeguarding their profitability.

Chart 1.3

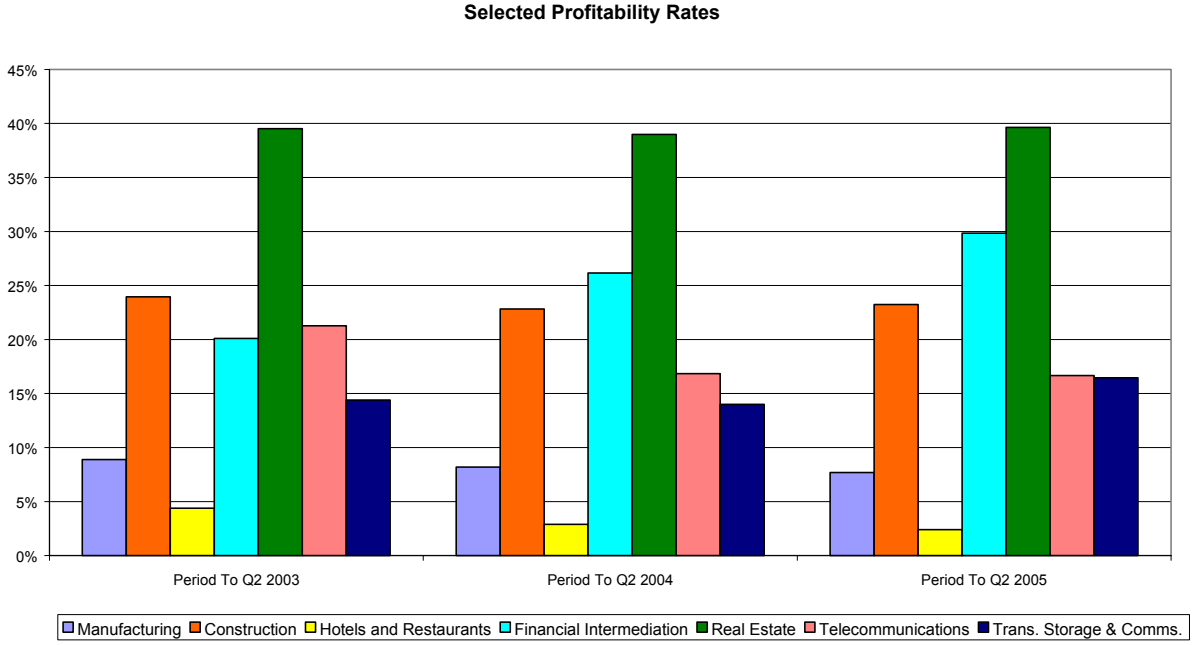


Sources: NSO

[10] The GOR is a measure of profitability, it shows how much of the value added is left after the labour component of the industry is compensated, as a percentage of turnover.

The drop from the levels recorded during the first six months of 2003 can also be seen in relation to the profitability rates recorded by other industries in the Maltese economy. In fact, as can be seen in Chart 1.4 hereunder, although historically, the electronic communications sector recorded one of the highest operating rates over time, this rate declined gradually, with other growing industries, such as financial intermediation, surpassing it.

Chart 1.4

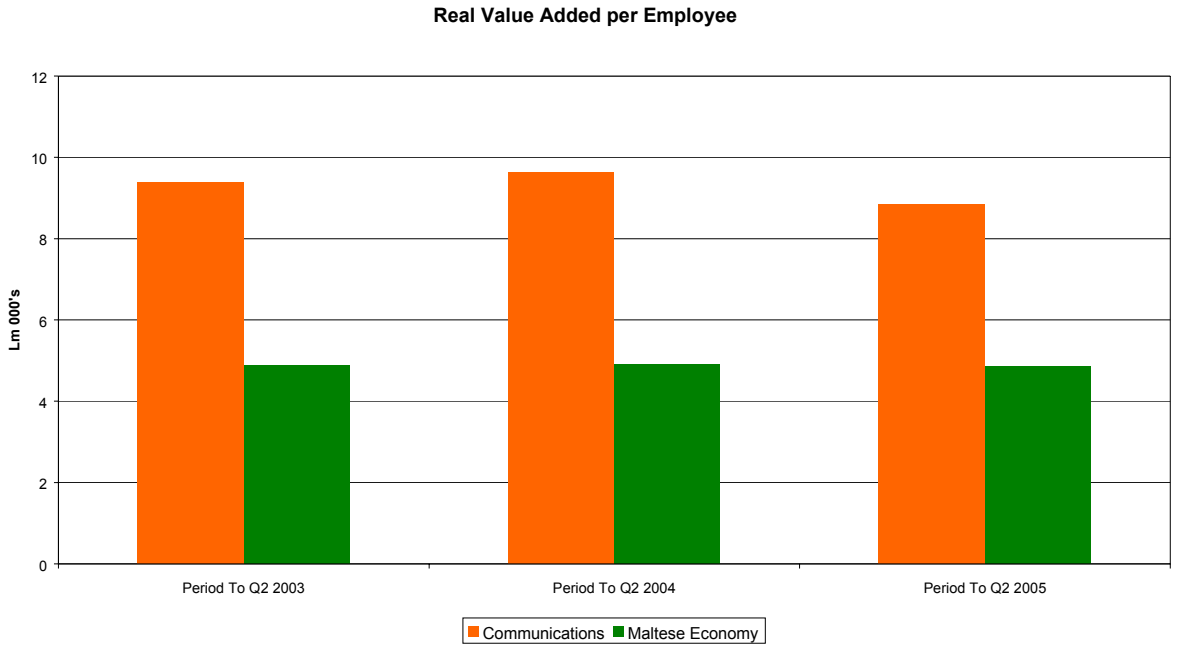


Sources: NSO

The communications industry is driven by the electronic communications firms, which due to their capital intensity, can benefit from considerable labour productivity. Chart 1.5 compares a rough measure of labour productivity for the industry with that of the Maltese economy as a whole. Labour productivity here is loosely defined as the ratio of real value added[11] to the number of persons employed, expressed in turn in full time equivalents[12].

[11] Value added for the communications industry is deflated by the Transport and Communications sub-index of the RPI, while that for the general economy is deflated by the GDP deflator.
[12] Full time equivalence was obtained by assuming that a full-timer works roughly twice as much as a part-timer.

Chart 1.5



Sources: NSO, CBM

As can be seen from the chart, the industry remained significantly more productive, as on average, each employee in the communications industry produced almost double the output produced by an employee in the rest of the economy. However, as can be seen in the chart, the level of productivity continued to decline. This can be attributable to the fact that the increase in nominal value added generated by the industry fell short of the increase in overall prices within the industry, thus resulting in a real drop in the industry's value added for the first six months of 2004 and 2005. It is also worth noting that the overall increase in prices for the first six months of 2004 and 2005 resulted from various fiscal measures, such as the increase in the VAT rate in January of 2004, as well as the 3% surcharge on mobile usage introduced in January of 2005.

The difference in productivity is reflected in the higher average wages earned within the communications industry, as high labour productivity demands higher wages. In fact, over the six month periods to June 2005, the average wage in the communications industry has been roughly 28% higher than that earned in the Maltese economy in general.

Apart from being a direct producer of services, the communications industry also plays another very important role in the economy, as its services underpin the day-to-day operations of other industries in the Maltese economy. In fact during the first six months of 2005, 30% of the industry's output was consumed as an input by the remaining industries in the economy. When compared with the corresponding periods of the previous two years, this rate remained roughly stable, confirming that the industry is an important producer of inputs in the economy.

Perhaps more indicative of the role of the industry is the level of consumption expenditure on electronic communications service by Maltese firms. In fact, during the first six months of 2003, 2004 and 2005, the share of electronic communications expenditure in total input consumption by industries stood roughly stable at 1.7%.

9 REGULATORY DEVELOPMENTS IN MALTA

The main developments during the period April to September 2005 are outlined below.

9.1 Consultative Documents

9.1.1 IPV6 Consultation Paper

This consultation paper aims to increase awareness of Internet Protocol version 6, IPv6, in Malta. It proposes the setting up a test-bed to which interested undertakings can connect in order to commence testing IPv6.

9.1.2 Public Consultation on Wireless Access Platforms for Electronic Commincations Services (WAPECS)

In view of the interest expressed in this subject, the Radio Spectrum Policy Group (RSPG) decided to issue a document for public comment in parallel with the ongoing discussion within the Group.

9.1.3 Current Cost Accounting Methodologies for the Electronic Communications Sector

MCA has published a consultative paper which examines the various issues that are relevant to a transition from a historic cost base to a current cost base for regulatory accounting purposes.

On 26 September 2005 the consultation period was extended to 14th October 2005.

9.1.4 Proposed Directive regarding Modalities of Payment for Contributions to the Cost of Legal Intercept Obligations

The purpose of this proposed directive is to regulate the manner in which contributions established under Regulation 13 of the Electronic Communications Networks and Services (General) Regulations are paid to the MCA.

The consultation period in respect of the abovementioned directive was extended on 30 August 2005 to 30 September 2005.

9.1.5 Consultation on E-Commerce Regulations

In September 2005 the Ministry For Competitiveness and Communications launched a consultation process on E-Commerce Regulations.

Proposed approach to the Regulation of Information Society Services

On 6th September, the Ministry for Competitiveness and Communications (MCMP) published draft regulations on electronic commerce for consultation. The purpose of these regulations is to set out a regulatory framework applicable to the provision of information society services in Malta.

9.2 Decision Notices

9.2.1 MCA assigns frequencies to Digital Terrestrial Television Network Operators

In May 2005 MCA assigned access to Rights of Use of Radio Frequencies in the UHF Band for the Development and Implementation of Digital Terrestrial Television (DTTV) Transmission Networks in Malta to Maltacom Plc and Multiplus Ltd

9.2.2 Quality of Service Requirements incumbent on Maltapost plc

In June 2005 MCA published its Decision regarding the Quality of Service (QoS) Standards to be achieved by Maltapost plc as the designated Universal Service Provider (USP).

9.2.3 Regulatory Framework for Radio Spectrum Policy in the European Community

The policy includes co-ordinating and supporting the radio spectrum needs of EU policies and initiatives in such sectors as communications, transport, R&D, environment and broadcasting.

9.2.4 Specifications for the Interim Numbering Portability Solution of both Fixed and Mobile Services

Following a broad consultative process with the network operators, the MCA published in July 2005 the specifications 'Mobile Number Portability Specifications for the Interim Solution' and 'Fixed Number Portability Specifications for the Interim Solution for individual subscriber numbers'. The scope of these documents is to specify all the business processes involved in providing number portability from the point when a request is made by a subscriber/user.

9.2.5 Statement of Proposed Decision regarding Carrier Selection for VOIP Services

In July 2005 MCA published a Statement of Proposed Decision establishing the regulatory framework for the provision of Voice over Internet Protocol (VoIP) services using a Carrier Selection facility.

9.2.6 Preliminary Decision regarding Maltacom’s Reference Unbundling Offer

This preliminary decision briefly describes MCA's initial assessment of Maltacom's Reference Unbundling Offer (RUO).

9.2.7 Consultation and Decision regarding Carrier Selection for VOIP Services

In August 2005 MCA published a Decision establishing the regulatory framework for the provision of Voice over Internet Protocol (VoIP) services using a Carrier Selection facility.

9.2.8 3G Frequencies assigned

In August 2005 MCA assigned access to rights of use of radio frequencies in the IMT-2000 band for the development and implementation of third generation (3G) mobile telephony networks in Malta to Vodafone (Malta) Ltd and Mobisle Communications Ltd (Go Mobile).

9.3 General Publications

9.3.1 List of Applicants for Grant of Rights of Use of Frequencies for BWA and 3G Mobile

In April 2005 MCA published the list of companies that submitted applications in response to the calls issued on the 2nd March 2005 with a deadline of 1600 CET on Friday 1st April 2005.

9.3.2 List of Confirmed Applications – Broadband Wireless Access

In April 2005 MCA finalised the application vetting process and the list of applicants. These applicants will be invited to participate in a comparative process.

9.3.3 Submissions in DTTV Comparative Process

At the expiry of the deadline on 15 April 2005 to respond to the Invitation to Participate in a Comparative Process (Beauty Contest) leading to Access for the Rights of Use of Radio Frequencies in the UHF Band for the Development and Implementation of Digital Terrestrial Television Transmission Networks in Malta, two submissions were received.

9.3.4 MCA 3rd Annual Conference

Notice of MCA 3rd Annual Conference to be held on Friday the 13th of May 2005 at the Radisson SAS Baypoint Resort in St George's Bay, St Julians issued on 26 April 2005. This year's topic is "VoIP: Transforming your Business

9.3.5 Consumer Perception Survey regarding Mobile Telephone Service

In April 2005 the MCA published the results of a consumer perception survey regarding mobile telephony services. The survey was carried out during December 2004.

9.3.6 Consumer Perception Survey regarding Broadband Services

In May 2005 the MCA published the results of a consumer perception survey regarding broadband services. The survey was carried out during December 2004 and January 2005

9.3.7 Consumer Perception Survey Results on Fixed Telephony and VOIP Services

In May 2005 MCA published the results of a consumer perception survey regarding fixed telephony and VoIP services. The survey was carried out during December 2004 and January 2005.

9.3.8 MCA and OFC sign Memorandum of Understanding

In May 2005 the MCA and the Office of Fair Competition (OFC) announced that they signed a Memorandum of Understanding (MoU) that is intended to bring about greater collaboration between the two authorities. It is also meant to provide a clearer understanding to sector players and other stakeholders, as to the modus operandi of the two authorities in matters of mutual interest.

Amongst others, the MoU addresses the procedure to be adopted by the two authorities with respect to investigations on issues of concurrent jurisdiction, market analysis and the sharing of information.

9.3.9 Regulators intensify work on Mobile International Roaming

The regulators from 32 European countries decided in their ERG meeting in Bled, Slovenia to intensify their efforts to find a harmonized approach to the regulation of mobile international roaming services.

9.3.10 BWA Beauty Contest

At the expiry of the deadline for submissions at 1600 CET on Friday 3rd June, seven submissions were received by MCA.

9.3.11 Quality of Service Measurement for Authorised Undertakings in the Electronic Communications Sector

In June 2005 MCA published its report on the abovementioned subject. The report outlines the manner in which the quality of service performance of authorised undertakings are to be measured.

9.3.12 Clarification on 'Hello' Promotion

On 4th July 2005 the MCA published its clarification on advertising of 'Hello' voice over broadband service made by Video-on-line.

9.3.13 Market Review Report on Wholesale Termination on Individual Mobile Networks

On 4th July 2005 MCA published its first market review report regarding "Wholesale termination on individual mobile networks". The report defines and analyses the market in question and identifies market players that have Significant Market Power (SMP) in this particular market.

On 13th July MCA published the response to the consultation received from the Office of Fair Competition (OFC) regarding the results of this market review report.

On 10th August 2005 the MCA published the response of the EU Commission to this review report.

9.3.14 3rd Electronic Communications Regulatory Forum

On 8 December 2005 MCA hosted the 3rd Electronic Communications Regulatory Forum. Topics discussed were the recently signed Memorandum of Understanding with the Office of Fair Competition, the Content Revolution, the current status of the Market Analysis, the 11th Implementation Report and Infringement Proceedings by the Commission.

9.3.15 EU Press Statements regarding Electronic Communications

In July 2005 the MCA published a number of statements issued by the EU Commission regarding radio local area networks, high speed internet access as well as measures to improve competition.

9.3.16 Electronic Communications Market Review (October 2004 – March 2005)

In July 2005 the MCA published its sixth edition of the Electronic Communications Market Review for the period 1 October 2004 to 31 March 2005.

9.3.17 National Numbering Plan Allocation Table

On 5th August 2005 the MCA published the first edition of the National Numbering Plan Allocations Table.

9.3.18 Policy and Implementation Strategy for Terrestrial Digital Audio Broadcasting

In August 2005 the MCA, in conjunction with the Ministry for Competitiveness and Communications (MCMP) published a document regarding the policy and implementation strategy for Terrestrial Digital Audio Broadcasting (T-DAB).

9.3 .19 EU Recommendations and Guidelines on Accounting Separation and Cost Accounting Methodologies

In September 2005 MCA published the EU recommendation on accounting separation and cost accounting systems under the regulatory framework for electronic communications.