

Telecommunications Market Review October 2003 – March 2004

Malta Communications Authority

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1 MARKET DEVELOPMENTS

This is the fourth publication of the Malta Communications Authority (MCA) Telecommunications Market Review. The report gives an overview of the six-month period ending March 2004, and provides an analysis of the main trends and developments in the various sectors of the Maltese telecommunications market.

At the end of March 2004 there were 206,126 fixed line telephony subscribers, representing an increase of 634 subscriptions over September 2003 and 1,189 subscriptions for the same period last year (i.e. March 2003). The penetration of fixed line telephony now stands at 51.6 lines per 100 inhabitants. The initial phase of Maltacom's tariff rebalancing process has come into effect on 1 June 2004. Its impact on local traffic patterns will be assessed and reported in future market reviews.

Mobile subscribers grew to 291,380 representing an increase over September 2003 of 10,533 or 3.8%. When viewed on a year-on-year basis, mobile subscribers grew by 16,767, or 6.1%. These figures reflect a healthy growth in penetration for the local mobile telephony market. Total revenues from mobile operations during 2003 grew to Lm42.1million, up from Lm34.6 million during 2002 representing an increase of 21.4%.

The Internet market also experienced positive growth both in terms of Internet subscriptions and broadband connections. In fact more than 80,000 Internet subscriptions were reported at the end of March 2004, of which nearly 25,000 were broadband connections. This means that broadband subscribers now constitute 31% of the market, while narrowband subscribers make up the remaining 68.75%.

The period under review was also characterised by further take up of Voice over Internet Protocol (VOIP) services for international calls. As a result VOIP, together with *ad hoc* special offers of heavily discounted international rates by Maltacom, brought about significant increases in volumes of international traffic.

A new section in the Market Review highlights the contribution of the communications sector to the local economy. It covers the period from 1999 to 2003. The analysis mainly reports investment, output and profitability.

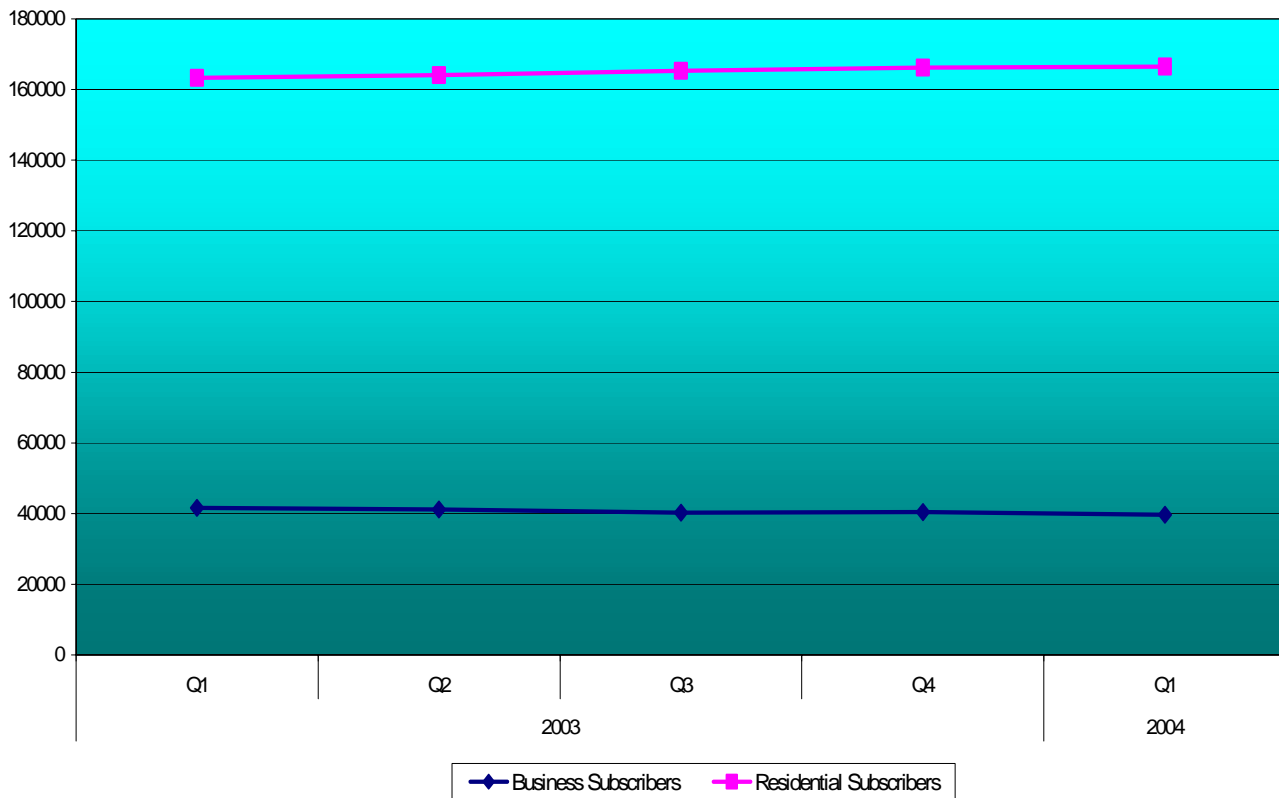
2 THE FIXED TELECOMMUNICATIONS MARKET

2.1 Fixed Line Subscriptions

At the end of March 2004 there were 206,126 fixed line telephony subscribers representing an increase of 634 lines over September 2003 and 1,189 subscriptions for the same period last year (i.e. March 2003). The penetration of fixed line telephony now stands at 51.6 lines per 100 inhabitants.

The following chart shows the split between residential and business subscribers. At March 2004, there were 166,510 residential subscribers and 39,706 business subscribers.

Fixed Line Subscribers



2.2 Fixed Line Telephony Traffic

2.2.1 Fixed line outgoing traffic terminating on the same network

The chart below reflects PSTN traffic, minutes originating and terminating on Maltacom's own network.

When the first quarter traffic for 2004 is compared to the same period in 2003 it is noted that there has been a reduction of 50 million minutes which is equivalent to 22.9%. An element of seasonal patterns in traffic volumes can also be observed.

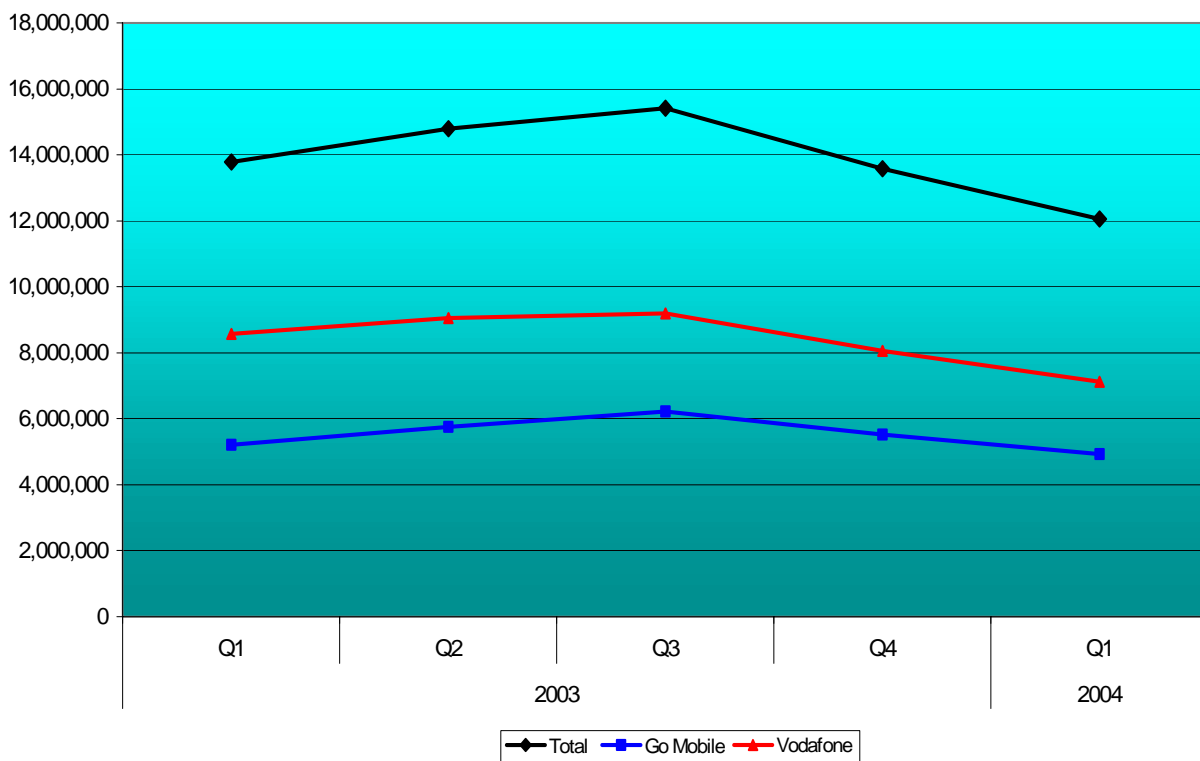
Call minutes terminating on the Maltacom network



2.2.2 Fixed line outgoing traffic terminating on mobile networks

As can be seen from the chart below, fixed to mobile traffic has been experiencing a steady decrease since Q3 2003. When comparing quarter 1 of 2004 with the same period in 2003 there were 12.4% less PSTN originating minutes terminating on mobile networks.

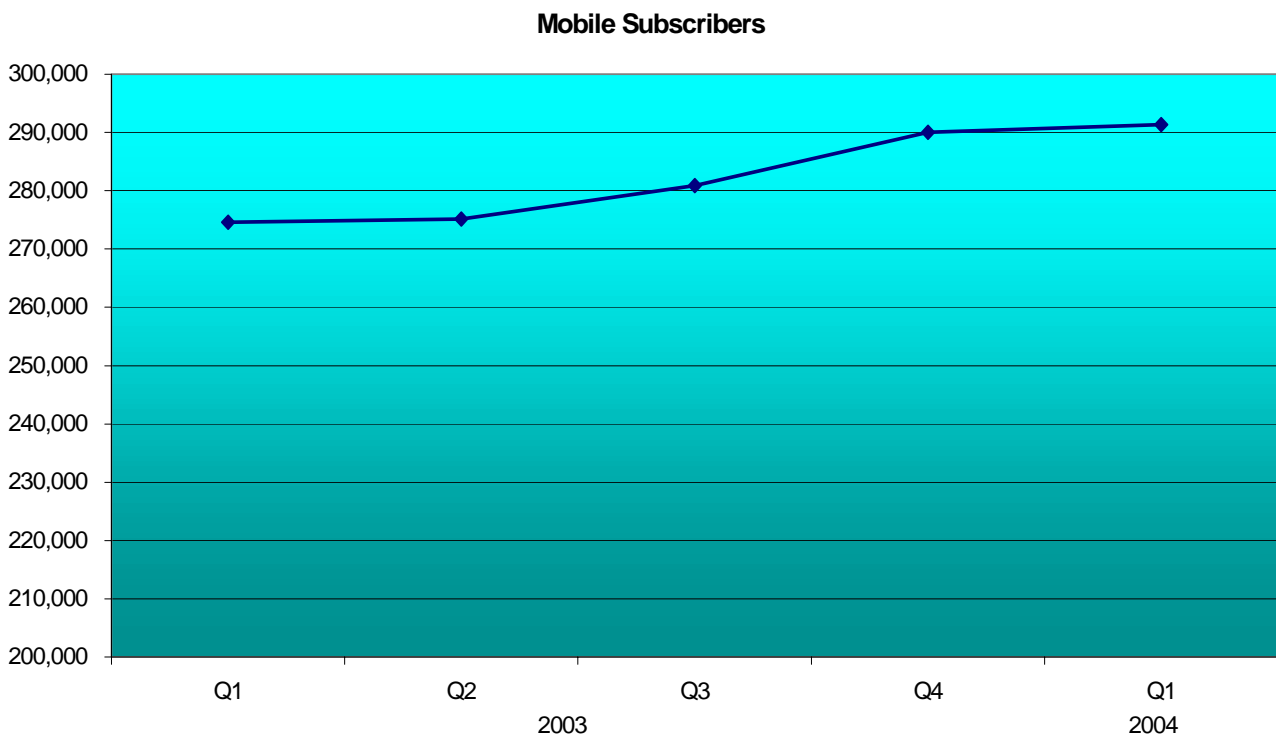
Fixed Line Minutes terminating on Mobile Networks



3 THE MOBILE TELECOMMUNICATIONS MARKET

3.1 Mobile Telephony Subscribers

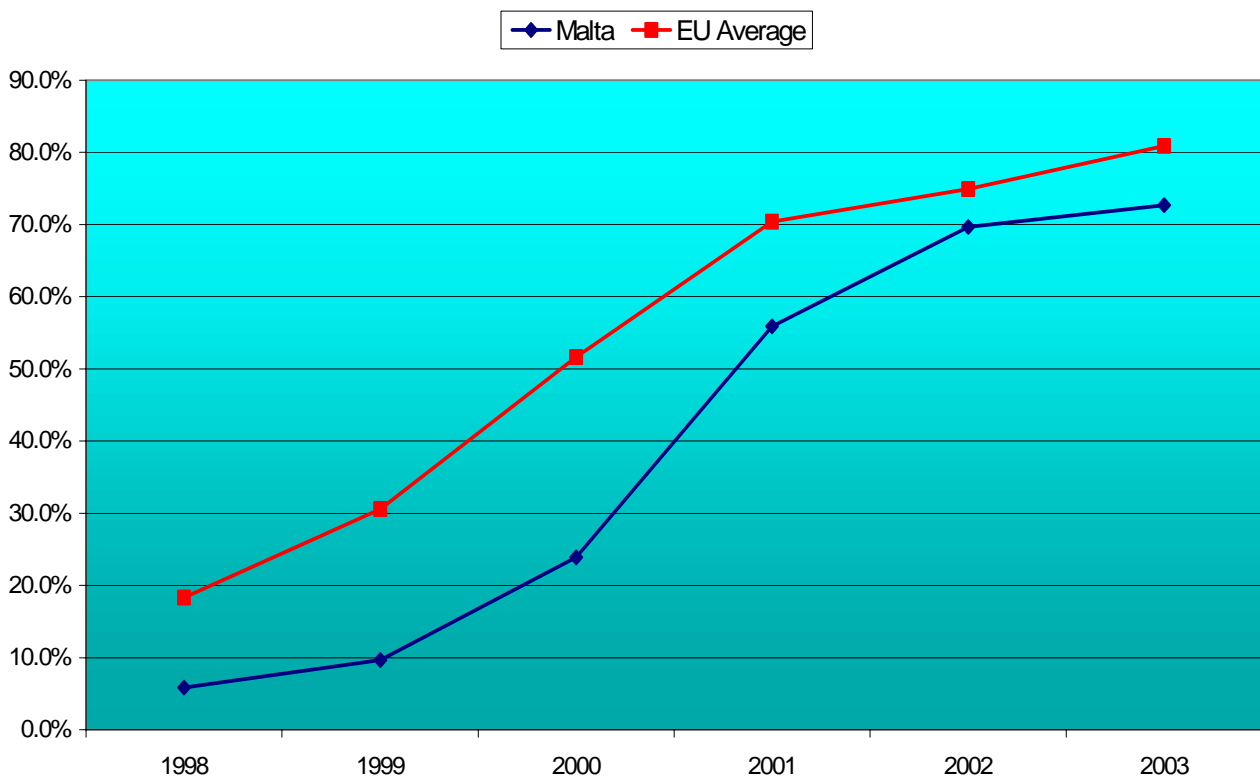
As at March 2004 there were a total of 291,380 mobile subscriptions representing an increase of 17,000 subscribers over the first quarter 2003 (i.e. 6.1%). This figure includes both post-paid (contract) and prepaid subscriptions.



3.2 Mobile Penetration

Subscriber growth in the local mobile telephony market effectively means that more than of 72% of the Maltese population are subscribed to a mobile network. When compared to the penetration figure in March 2003 this reflects an increase of 3%.

The graph below shows the number of mobile subscribers per inhabitant compared with that of the EU15 average, over the five years to 2003. As indicated by the graph, the local penetration rate is converging steadily to that of the EU.

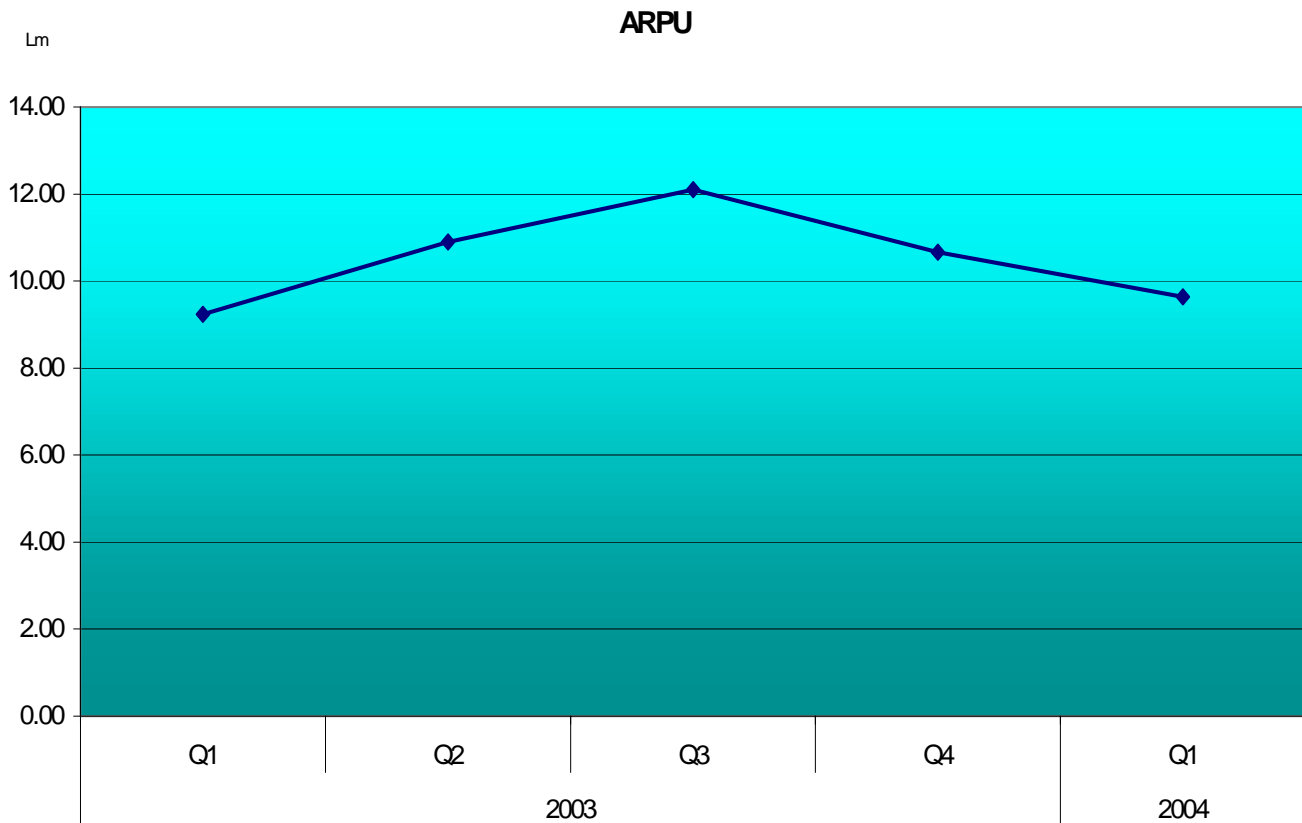


3.3 Average Revenue Per User

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 mobile subscriber for a network over a one-month period.

The ARPU figures traditionally follow a seasonal pattern. This can easily be seen in the graph below which reflects a peak in the summer period.

The ARPU increased by 4.2% over the comparable quarter of 2003. Given that there were no significant increases in tariffs, the rise in revenue may be attributable entirely to higher usage and spending habits by subscribers.



3.4 Outgoing Mobile Traffic

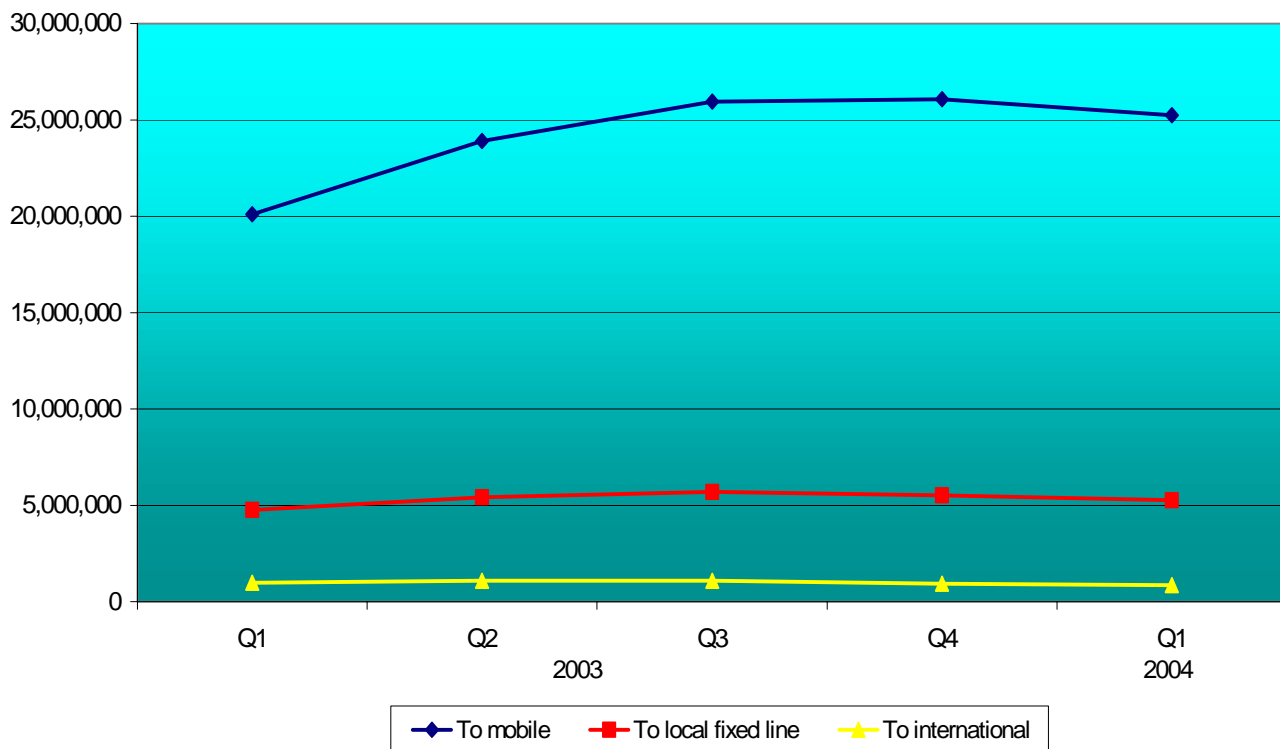
The graph below illustrates the total number of minutes made by mobile subscribers over the past year. It reflects the outgoing mobile traffic towards 3 broad destination categories, being calls to other mobile operators' networks, calls to fixed-line networks, and calls to international.

It can be seen that, when viewed on a year-on-year basis, mobile-to-mobile traffic expanded by 5 million minutes in the first quarter of 2004, representing an increase of 25%. On a quarterly basis however, the chart indicates a general declining trend triggered from the third quarter of 2003, which could be attributable to seasonality factors.

The volume of mobile to fixed minutes registered an increase of 10% over the same period last year, whereas international minutes suffered a decrease of nearly 12%.

The latter decline may be attributable to competition from cheaper rate offers by VOIP operators.

Mobile Outgoing Minutes

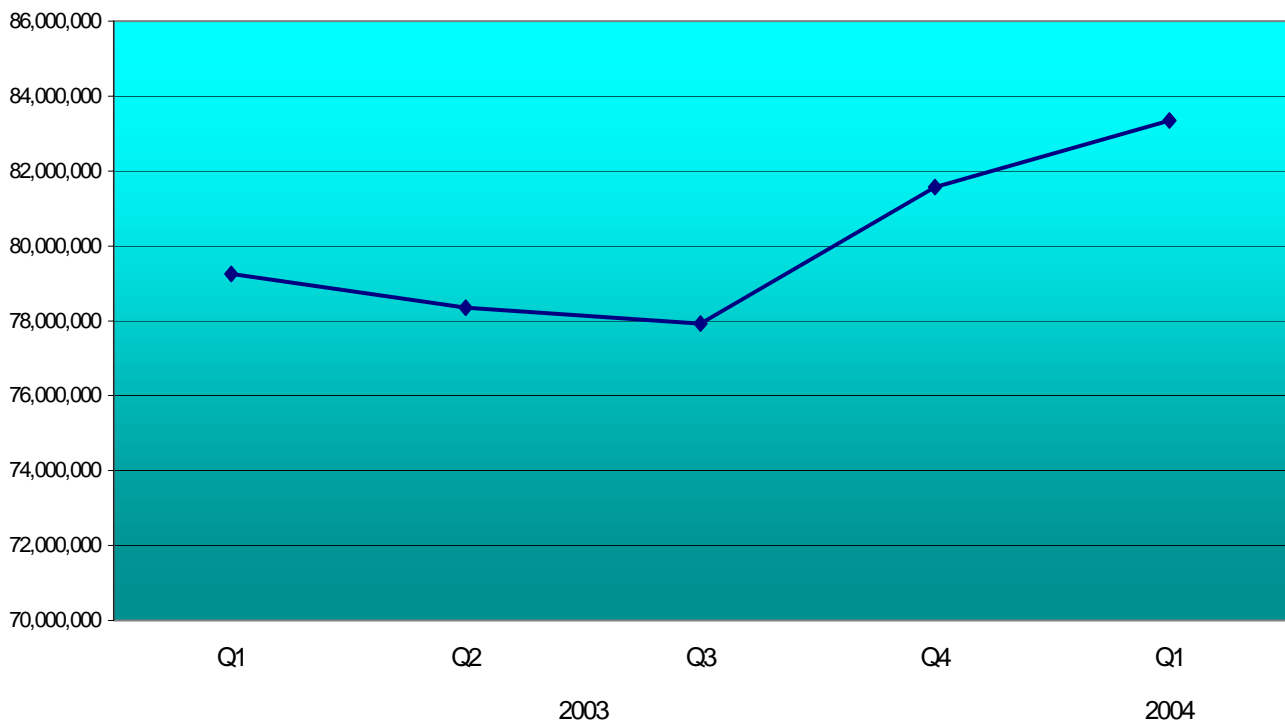


3.5 SMS traffic

SMS traffic grew by over four million messages between the first quarter of 2003 and the same quarter of 2004, resulting in an annual growth of 5.2%.

Both operators reduced their SMS tariffs during September and October 2003. Furthermore, the continued growth in subscriber base during the year contributed to this increase in the volume of SMS traffic.

SMS

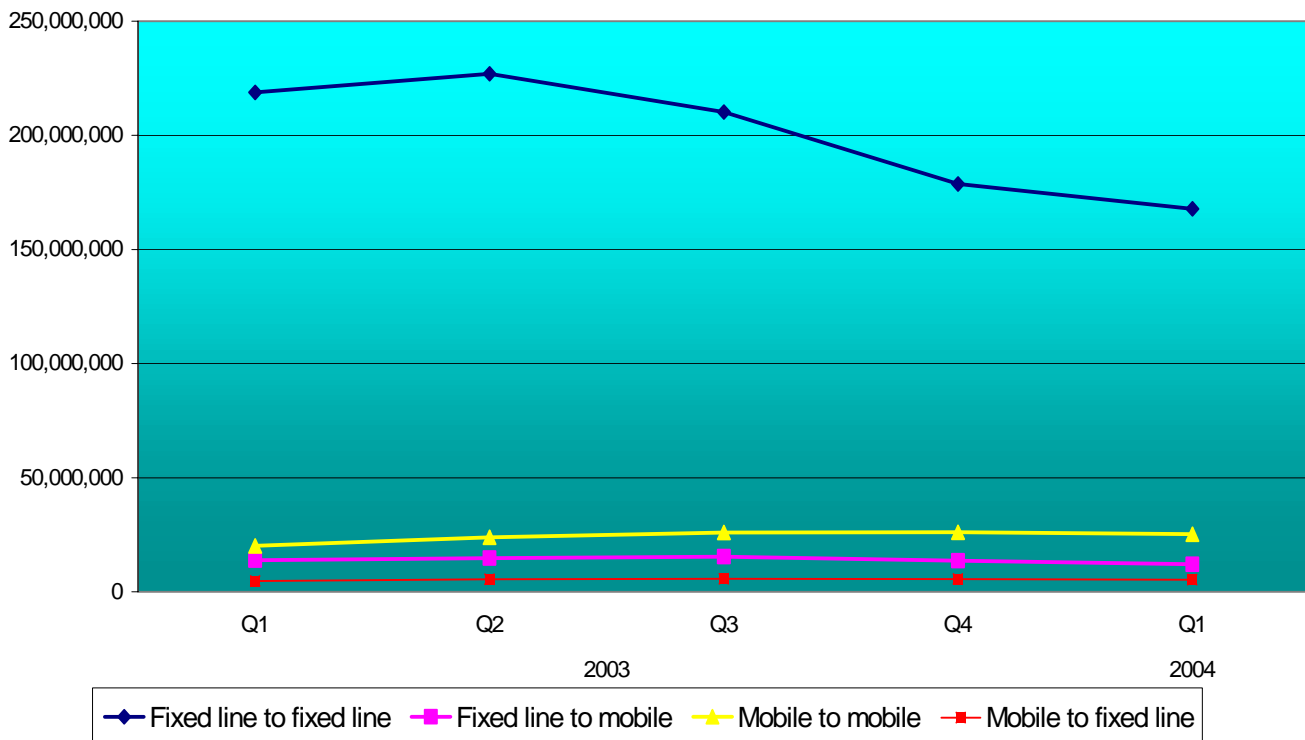


4 VOICE TELEPHONY MARKET

4.1 Local Voice Telephony traffic

The chart below shows clearly that although the use of fixed-to-fixed-line telephony is declining, it still remains the most popular form of communications in terms of absolute volume of minutes consumed.

Local Voice Telephony Traffic

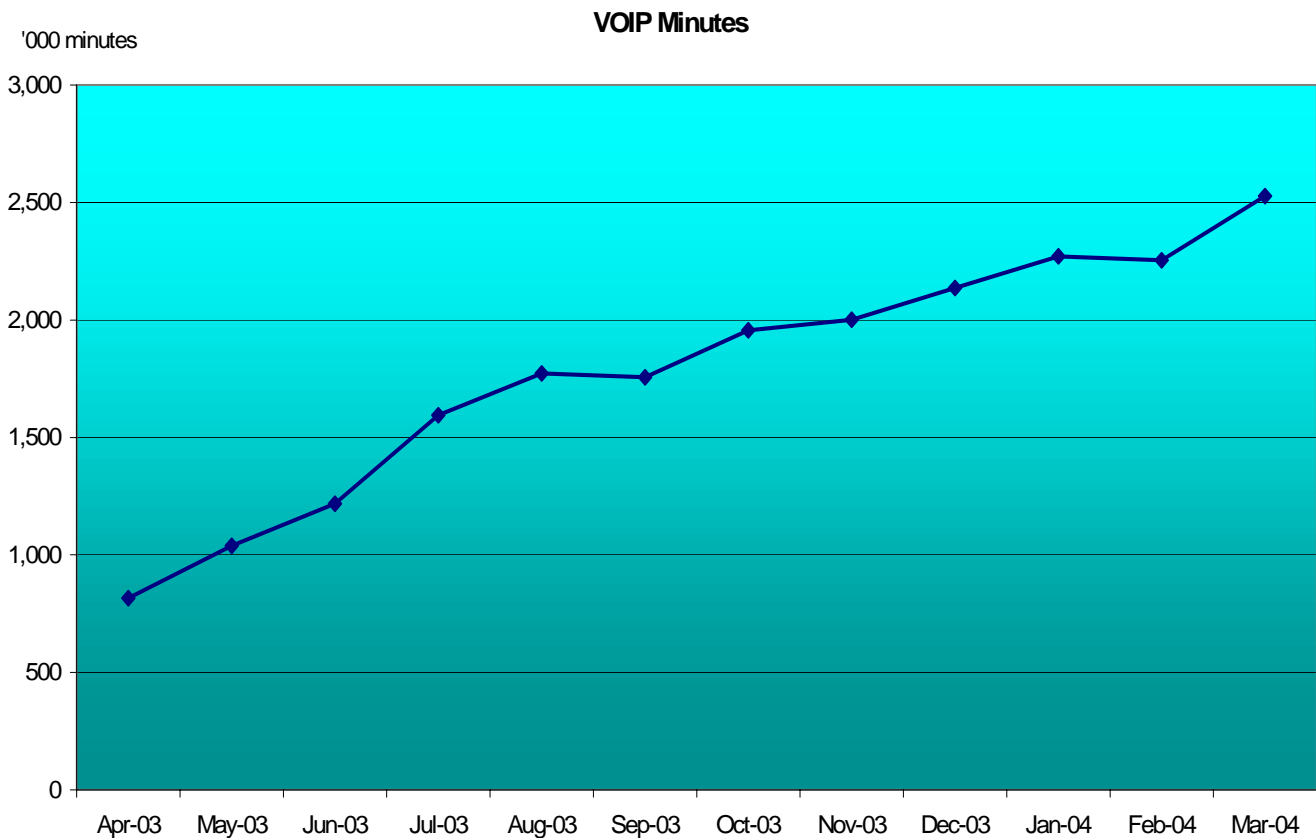


4.2 Voice Over Internet Protocol (VOIP)

VOIP is a relatively new service in Malta, and was launched towards the end of 2002 offering low cost international calls over IP. Since that dated there has been significant growth in this area as evidenced in the chart hereunder.

VOIP usage has seen consistent growth as more service providers entered the marketplace with increased competition and marketing, creating greater awareness about VOIP services. Significantly cheaper international rates combined with improved retail distribution and availability of prepaid VOIP cards can be considered to have fuelled the growth of VOIP.

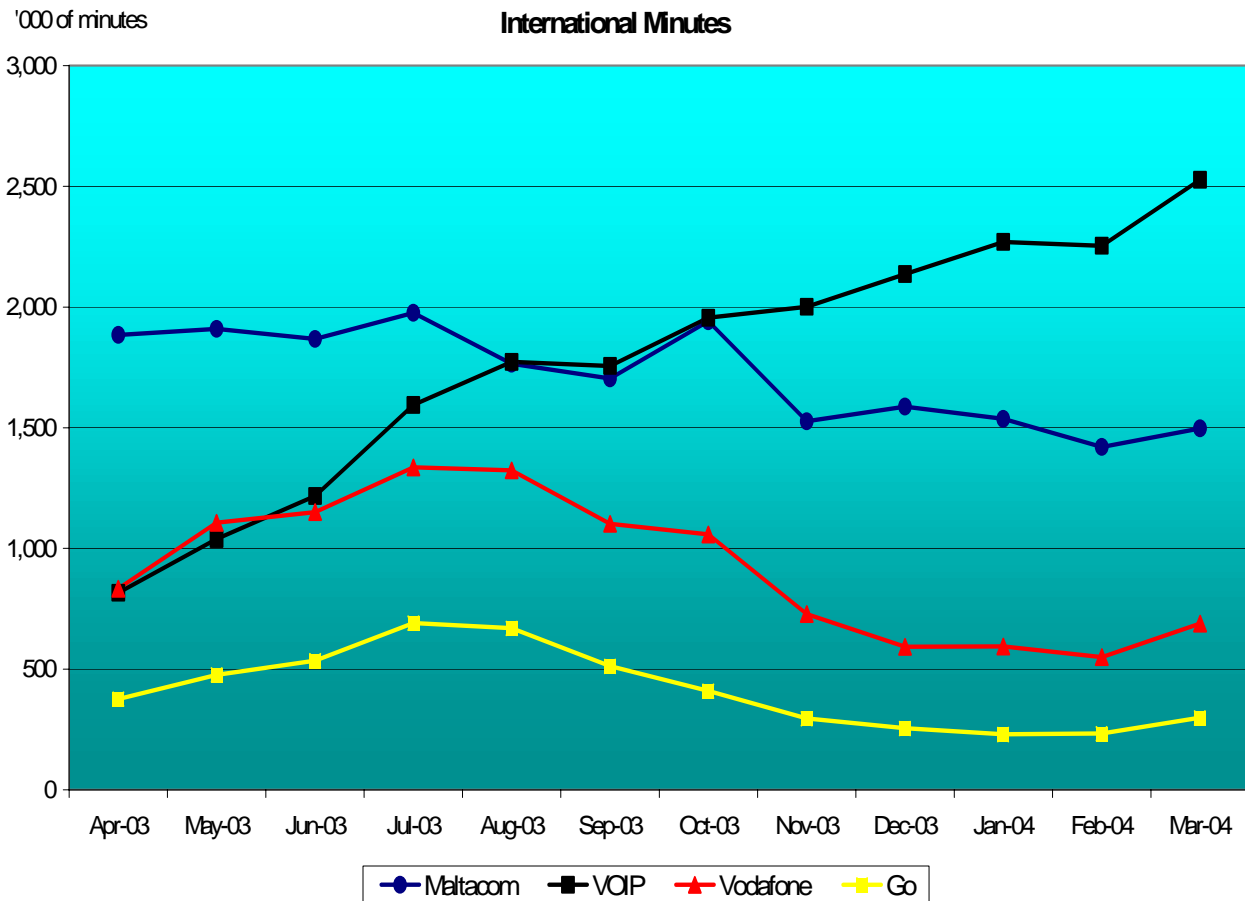
For the period January to March 2004, VOIP services experienced an upturn of 5.6 million minutes when compared to the same period last year, representing an increase of 400%.



4.3 International Minutes

An increase of 43% in total international outgoing minutes was registered between the first three months of 2003 and the comparable period this year. As can be seen the increase is mainly due to the steep growth in VOIP minutes.

This low-cost service entering the market has resulted in an overall increase in outgoing international call traffic. It is clear that VOIP has also grown at the expense of other providers of international calls, obviously due to lower pricing strategies. In fact when minutes from March 2003 to March 2004 are aggregated, VOIP had a 35.7% of the international whilst Maltacom had 36.6% of all international outgoing minutes.

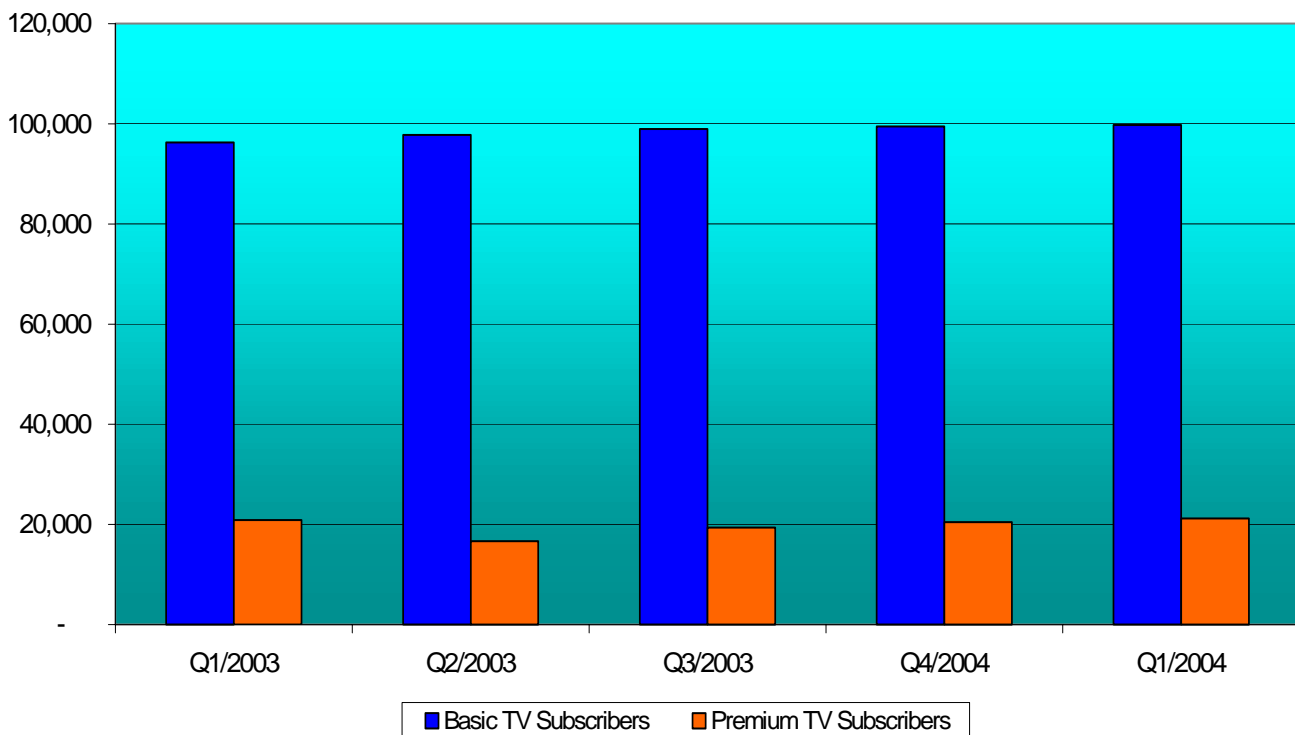


5 THE CABLE TELEVISION MARKET

5.1 Cable Television Subscribers

At the end of March 2004 cable television subscriptions stood at 99,732, whilst premium subscribers stood at 21,232. When compared to the same period in 2003, cable television subscriptions grew by 3,492 whilst premium subscriptions increased by 379, reflecting a growth rate of 3.6% and 1.8% respectively.

Cable Television Subscriptions

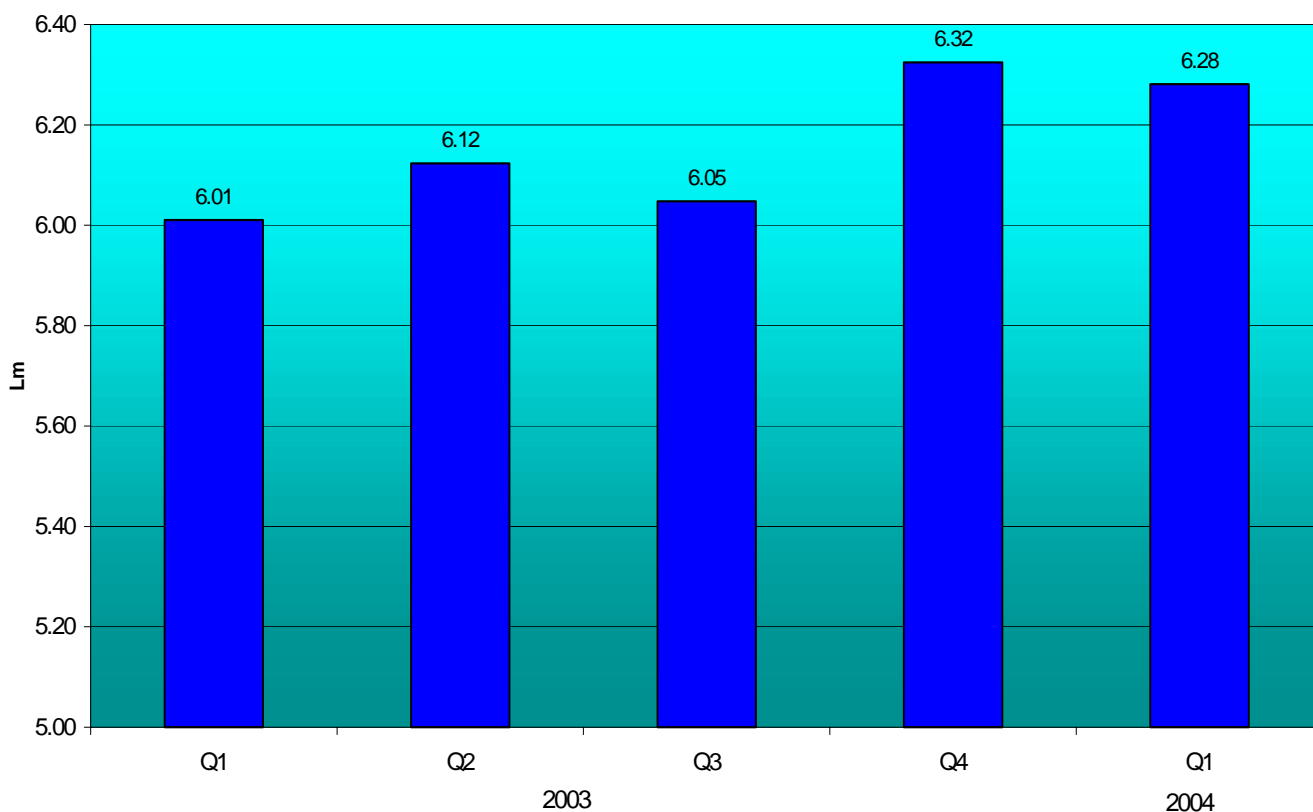


5.2 Cable Television Average Revenue Per Subscriber

The graph below shows the average monthly amount spent per subscriber on cable television services for the past year. A slight reduction in the ARPU can be observed in the third quarter of 2003, despite an upward adjustment in monthly tariffs for some basic and premium services.

This mirrors the premium subscriptions, which also fall during the same period. Such a decline could be partially due to the content of premium channels, which includes the sports channel. This channel is based primarily on English and Italian football, which is 'off season' in summer months.

Cable TV ARPU



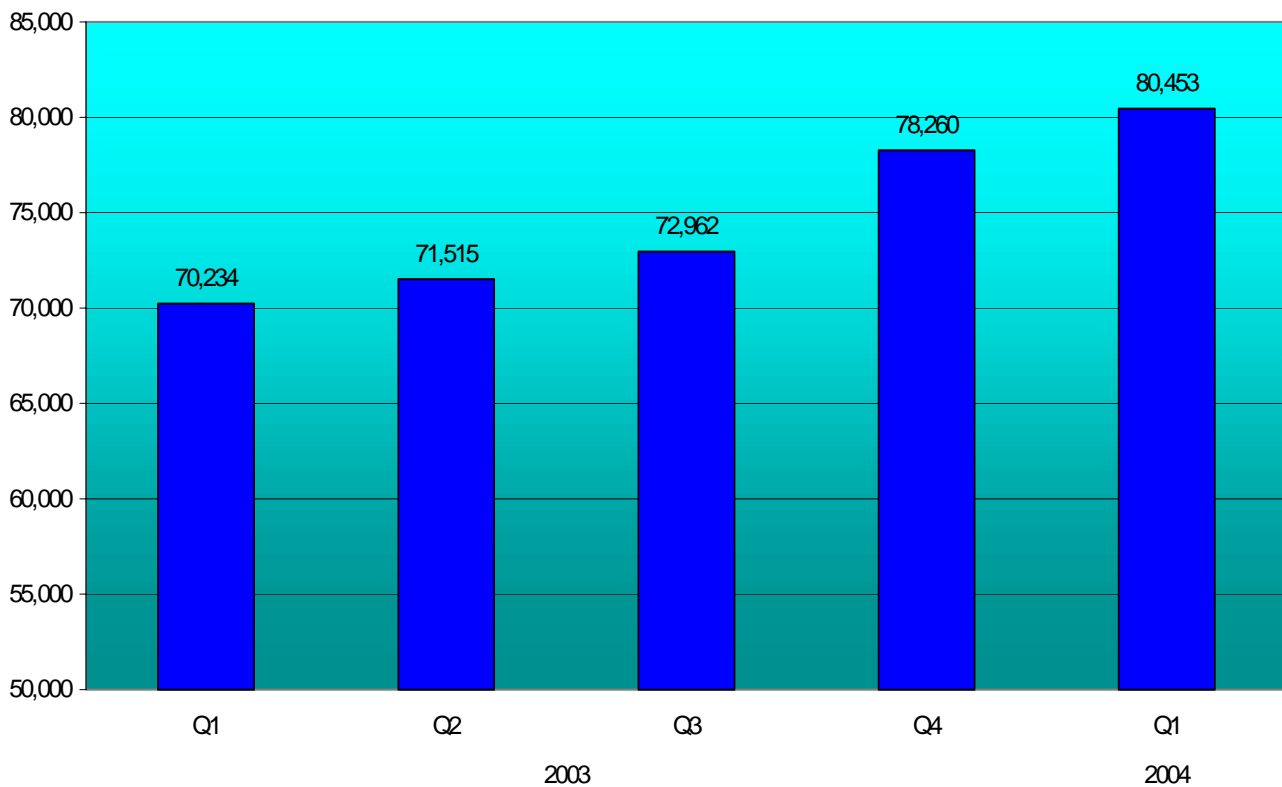
6 INTERNET

6.1 Internet Subscriptions

As at the end of March 2004, the number of Internet subscriptions amounted to 80,453, up by 10,219 subscribers or 14.5 % over the same period last year.

Consequently these amounted to 20 subscriptions per 100 inhabitants, compared to 17 in the first quarter of 2003.

Internet Subscribers

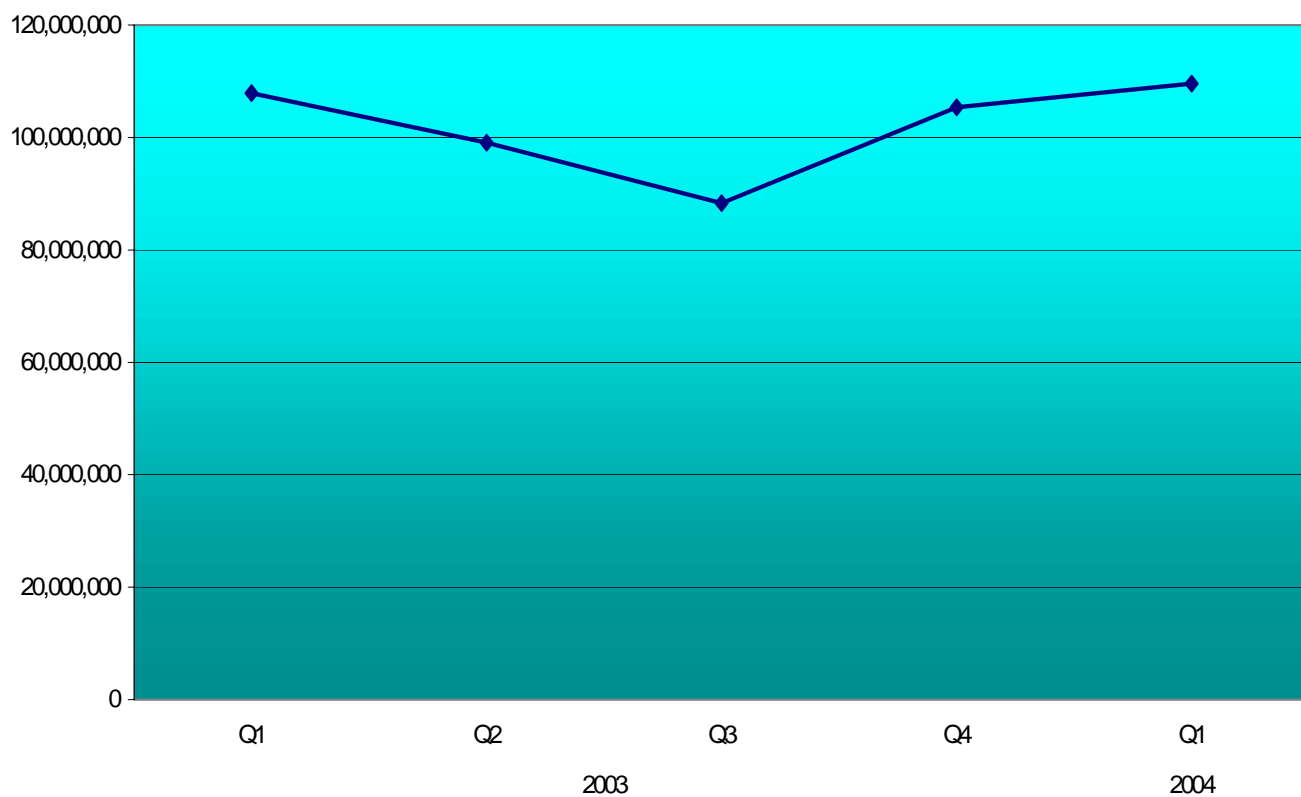


Source: NSO

6.2 Dial-Up Internet Traffic

Despite the increase in broadband penetration the first quarter of 2004 still registered a 1.5% increase in Internet minutes, when compared to the same period in 2003.

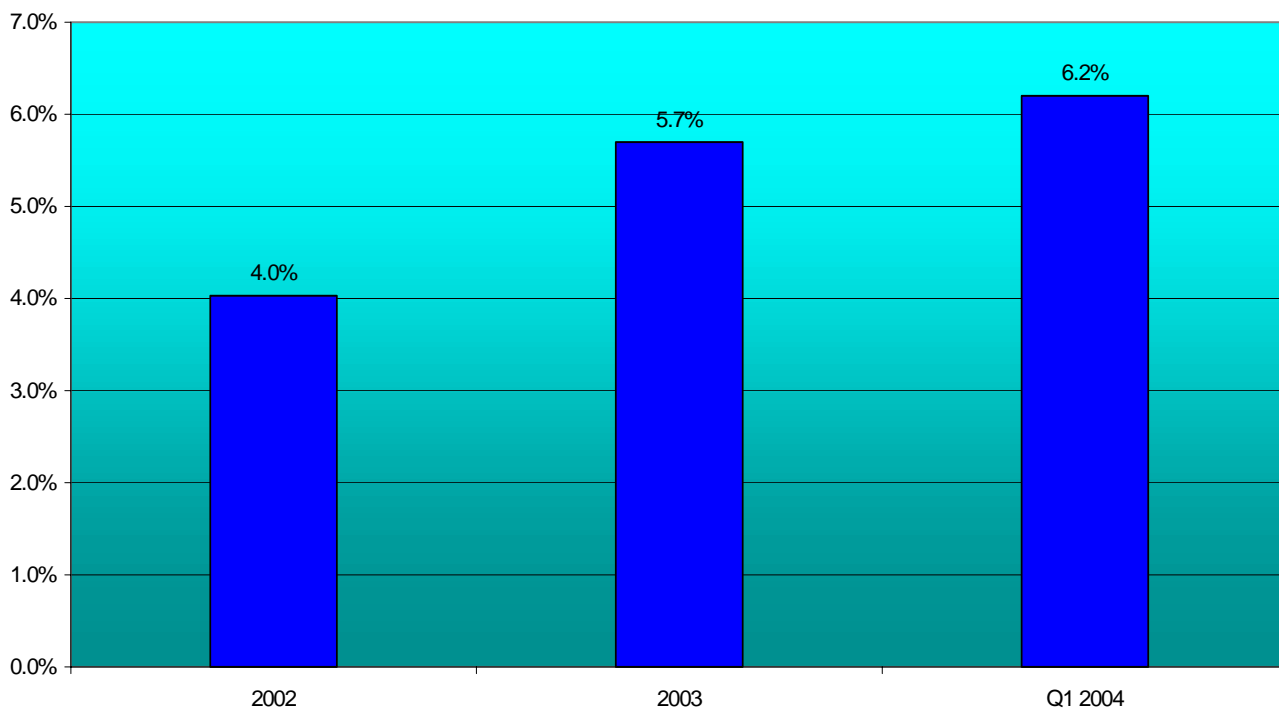
Internet Minutes



6.3 Broadband Penetration

The chart below shows the penetration rates of broadband subscriptions for the years 2002, 2003 and Quarter 1 of 2004.

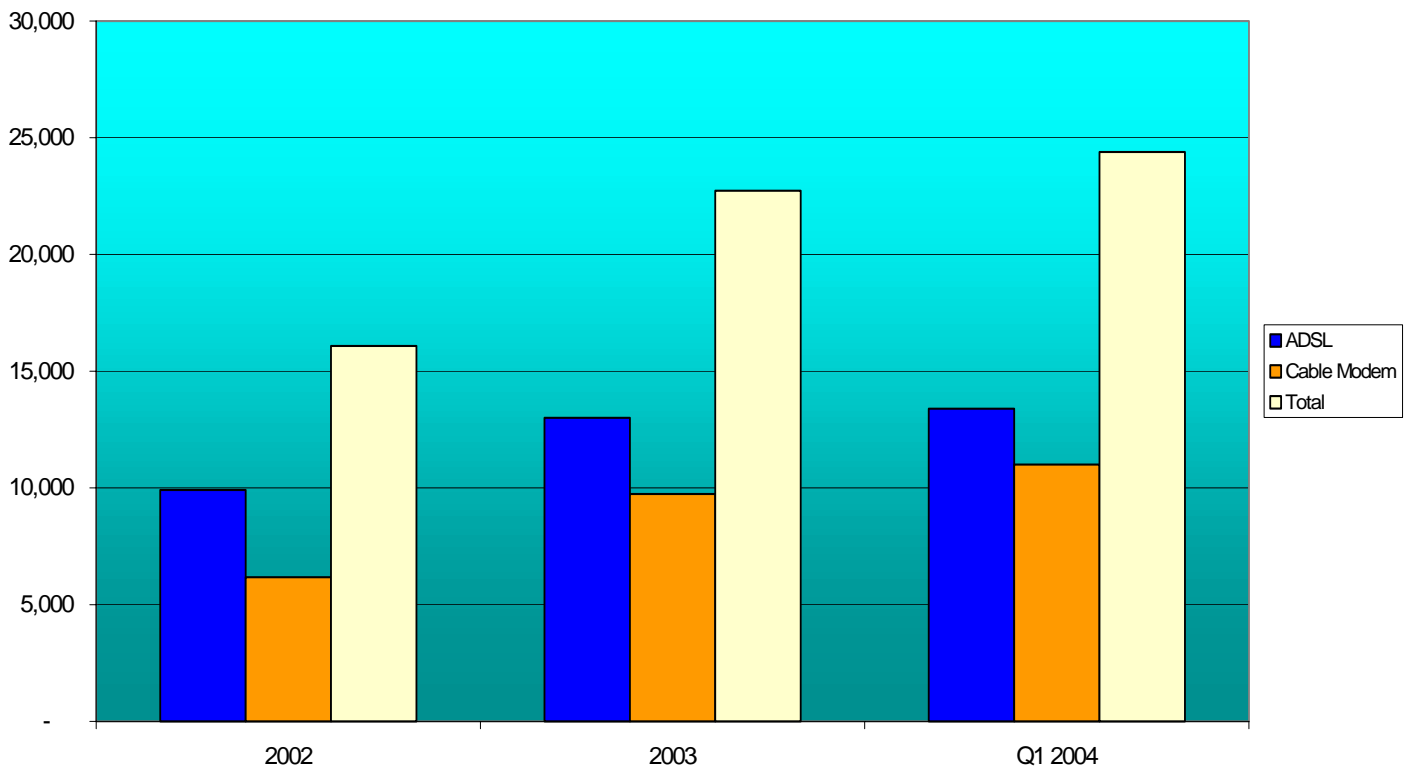
Broadband Penetration Rate (% of population)



6.4 Broadband Access Lines by Technology

As shown in the chart above, Broadband Internet has experienced significant growth since 2002. In absolute terms the subscriber base grew by 41.4% in 2003 and by a further 8.8% in the first quarter of 2004. The main growth rates were experienced in Cable Modems although ADSL subscriptions also experienced significant growth.

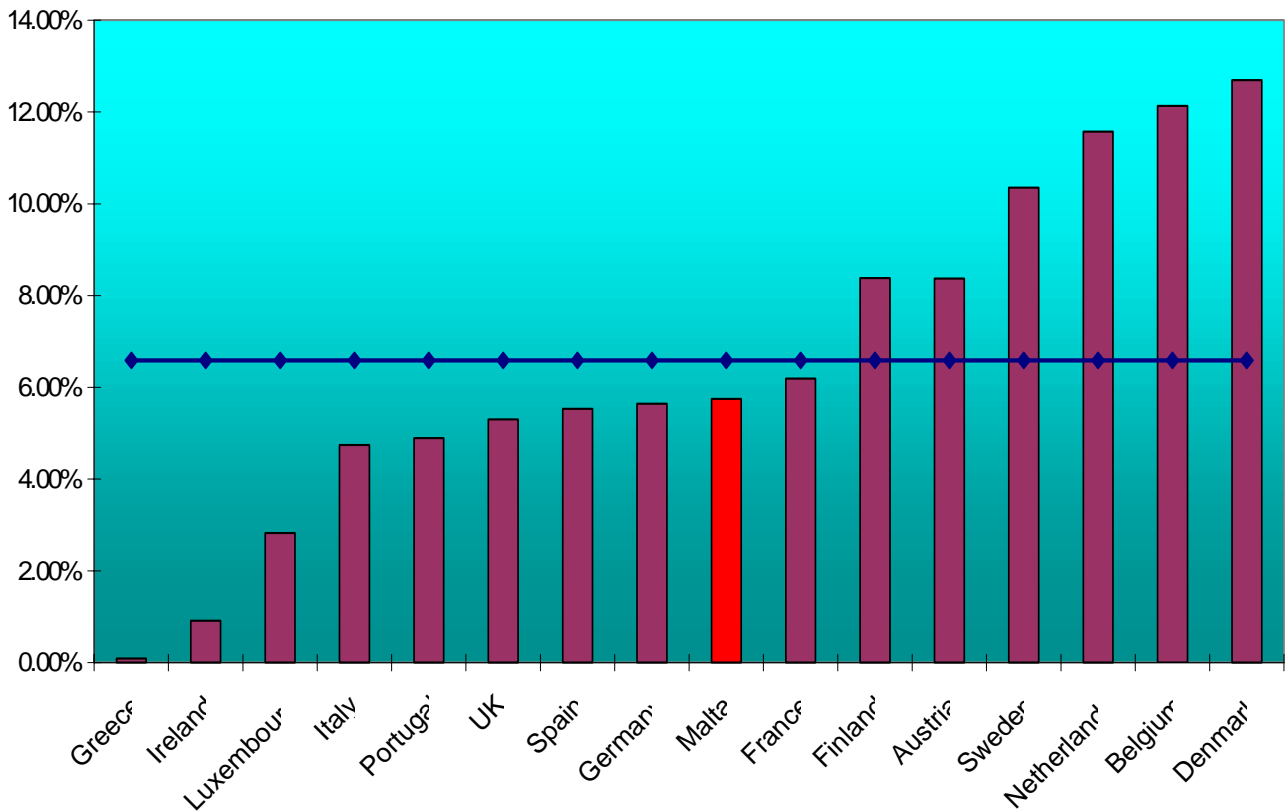
Broadband Access Lines by Technology



6.5 EU Broadband Penetration

Malta's broadband penetration rate compares very well with the rest of Europe. As indicated in the chart hereunder, at the beginning of January 2004 Malta was slightly just under the EU average, whilst outperforming the penetration rates recorded in the UK and Germany. The first quarter of 2004 has continued to register broadband growth and should probably reach the EU average penetration by mid 2004.

Broadband Penetration - January 2004



7 THE COMMUNICATIONS¹ INDUSTRY IN THE MALTESE ECONOMY (1999-2003)

Besides contributing to the generation of income in the economy, electronic communications services are also used by other industries in their production processes. Thus the communications industry is also an important input to other industries, such as the manufacturing and the tourism industries, which in turn are the main drivers of the Maltese economy.

Indeed, if one considers the telecommunications sector, which accounts for more than 90% of the total turnover in the communications industry, 27% of the sector's output was consumed as an input by the rest of the Maltese industries during the period 1999-2003. As a whole, this output represented an average of 1.3% of the overall intermediate goods² purchased by Maltese industries during this period.

The communications industry has also made a significant contribution to economic activity in its own right. In fact, on average, the value-added generated by the communications industry accounted for 3% of GDP between 1999 and 2003³. In addition, spurred mainly by the telecommunication sector, gross revenues expanded from Lm75 million in 1999 to Lm104.5 million in 2003. As shown in the next chart, while following the overall economic cycle, the growth rate of revenues from communication services managed to outperform that of the Maltese economy as a whole, during the 1999-2003 period.

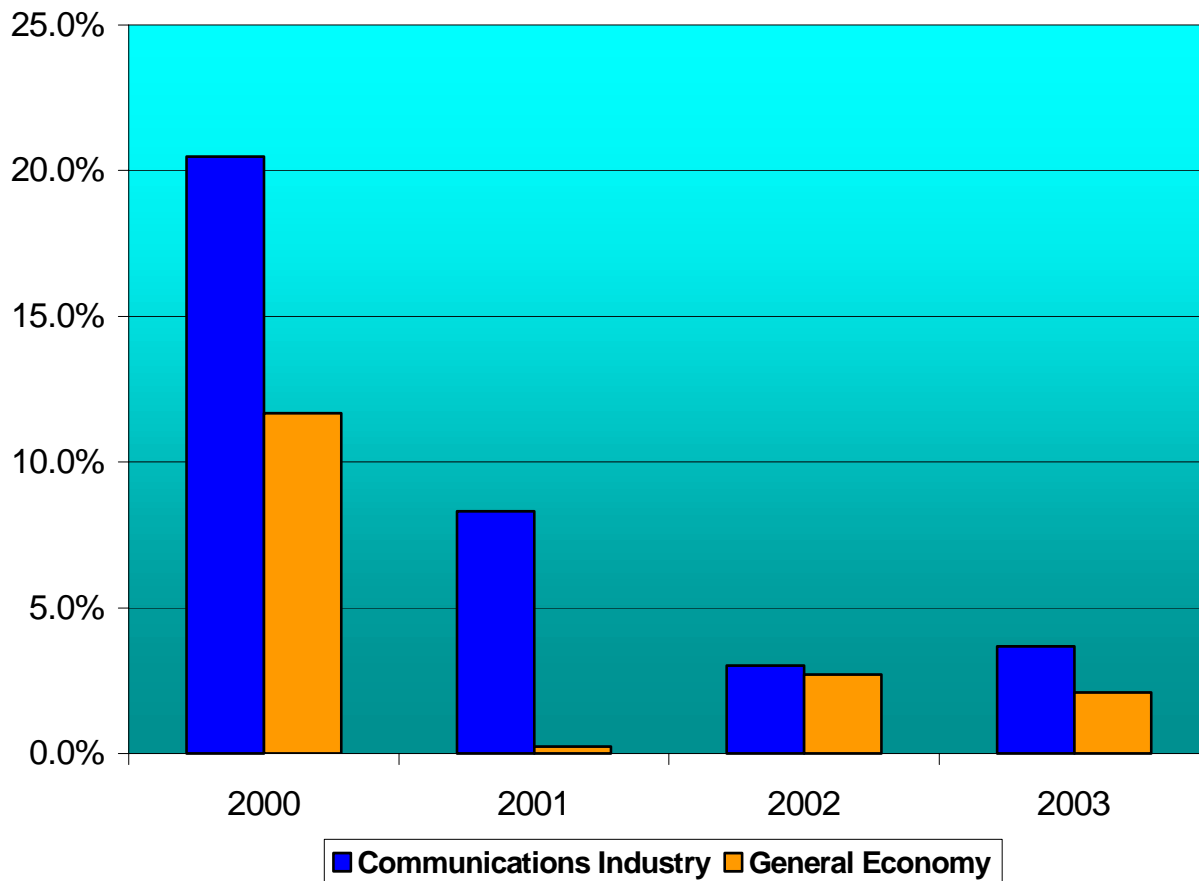
This pattern has also prevailed when the Maltese economy achieved very high growth rates in output. For example, in 2000, while the export-led growth in gross output of the economy stood at 11.7%, the communications industry achieved a growth rate of 21%. Indeed the year 2000 has been an exceptional year for the telecommunications sector, characterised by a surge in demand, high investment rates and new entrants in the market.

¹ The communications industry incorporates post, courier and telecommunications services.

² Intermediate goods consist of goods and services consumed as inputs by a process of production, excluding fixed assets. These goods and services may be either transformed or used up by the production process.

³The GDP (ESA95) figure for 2003 is an MCA estimate, as the official NSO figure was not yet available at the time of writing.

Growth in Turnover

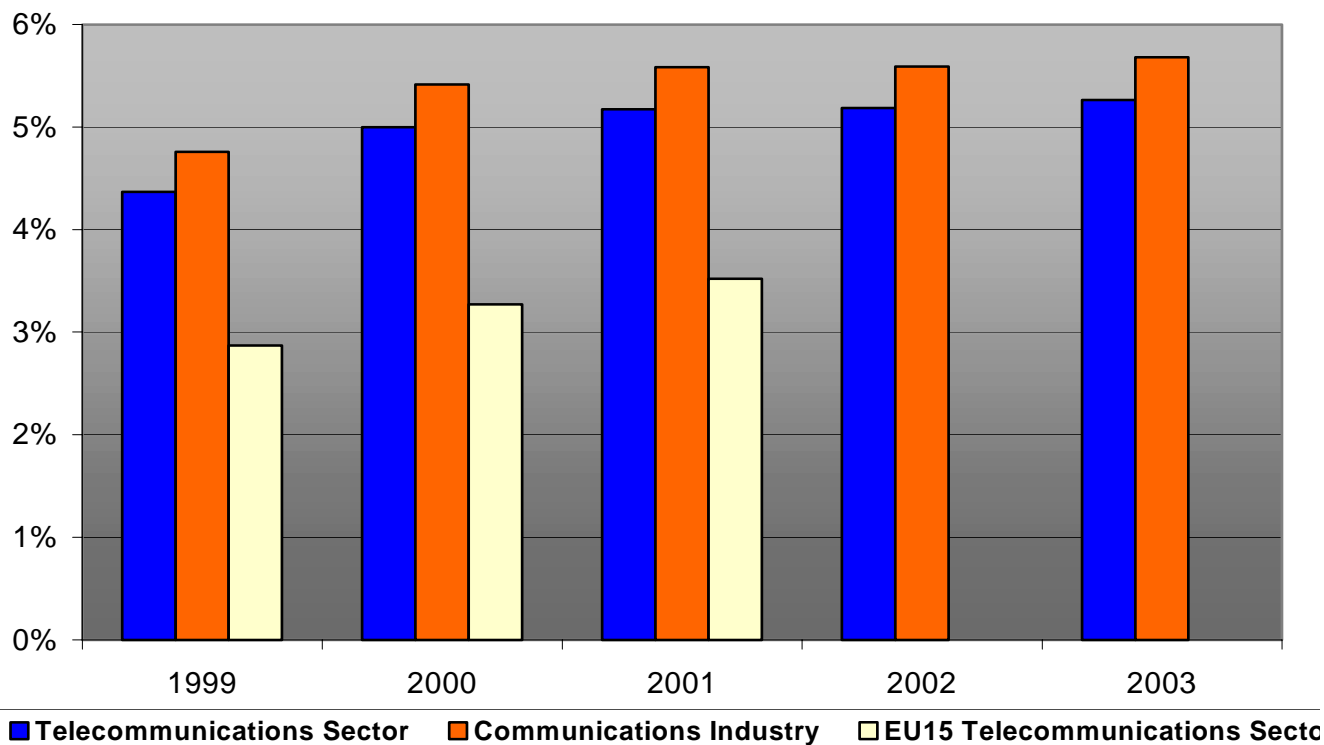


Sources: NSO;MCA estimates

The following chart indicates the GDP – Turnover ratio of the local communications industry and the telecommunications sector, along with the respective ratio of the EU15 telecommunications turnover. As can be seen therein, this ratio kept an upward trend for both local communications industry as a whole and the telecommunications sector specifically.

In fact the turnover from telecommunications services increased from 4.4% in 1999 to 5.3% in 2003, and remained consistently higher than the ratio recorded in the EU15 countries.

Turnover to GDP



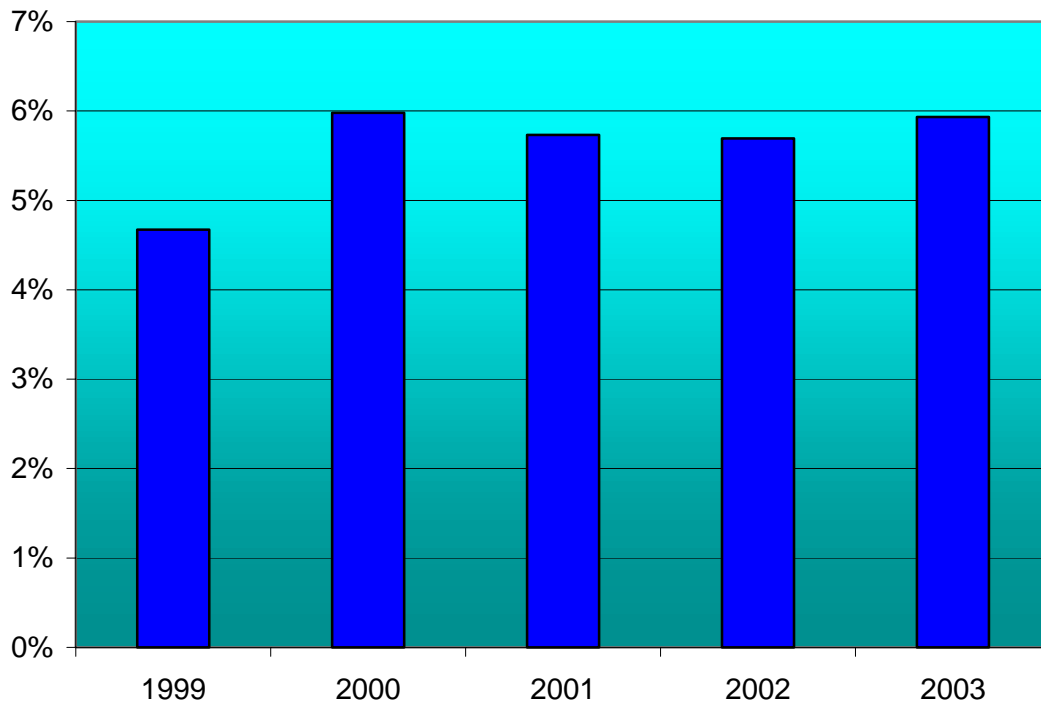
Sources: NSO; Eurostat ('Telecommunications in Europe'), Statistics in Focus, Theme 4 (2003); MCA estimates

The growth in the telecommunications sector can also be gauged from the increase in the households' consumption expenditure on these services. Consumption expenditure by households on telecommunications services increased (in real terms⁴) from Lm 50.4 million in 1999 to Lm72.2 million in 2003, mainly reflecting the significant growth in mobile and Internet penetration in Malta. This expenditure did not only grow in absolute terms, but more importantly grew in relation to other goods and services purchased by Maltese households. In fact, as can be seen in the chart below, the share of expenditure on telecommunications services in households' total expenditure⁵ increased to 5.9% in 2003, from 4.7% in 1999.

⁴ Deflated by the RPI (2002 = 100)

⁵ Figures for total household final expenditure (ESA95) for 2003 are MCA estimates, as official figures were not available at the time of writing.

Share of Telecommunications Expenditure in Total Households' Consumption



Sources: NSO;MCA estimates

The dominance of the telecommunications sector makes the communications industry's production process highly capital intensive. This industry is therefore characterised by substantial investment flows aimed at technological upgrades as well as the maintenance of the existing capital stock.

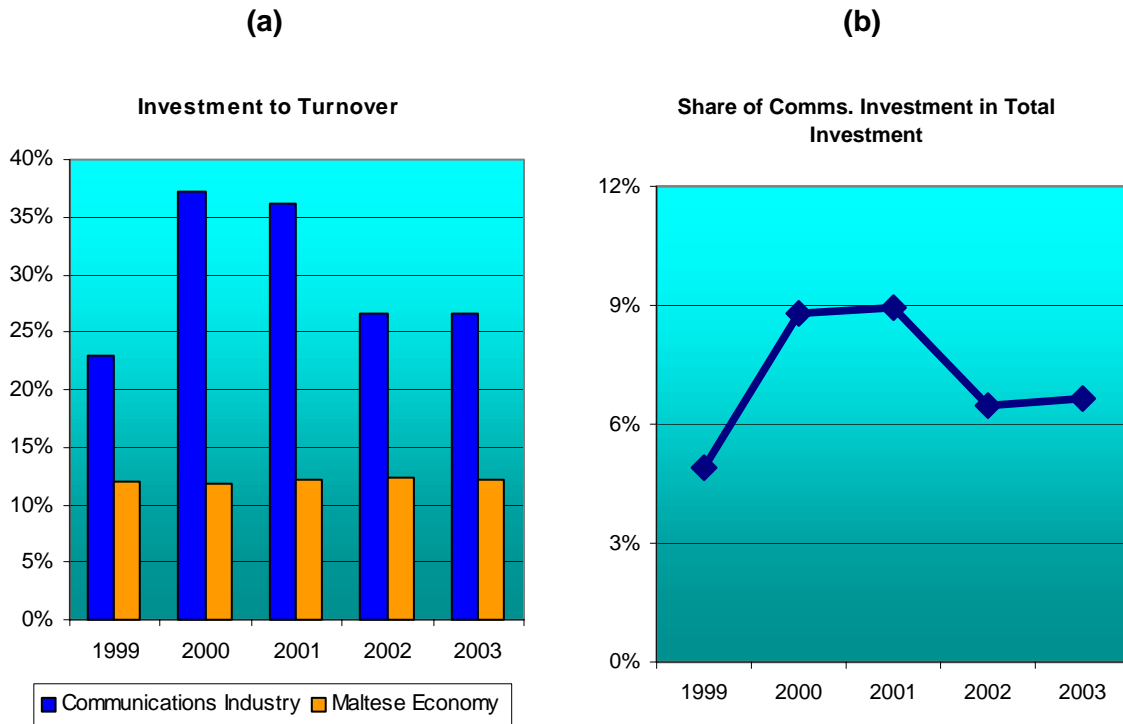
As can be seen in chart (a), the investment rate of the communications sector, calculated as the ratio of investment in the communications industry to total turnover⁶, has consistently been roughly double to that registered for the Maltese economy as a whole. In fact, over the period reviewed, while the investment rate of the communications industry averaged at 30%, that of the whole economy stood at

⁶ The investment figures for the communications and the telecommunications industry, as well as the gross fixed capital formation of the Maltese economy for 2003, are MCA estimates, as official ESA95 data was not available at the time of writing.

12%. This shows clearly that a greater proportion of the revenues generated from the firms within the industry are injected in the form of new investment.

The investment flows of the communications industry have also contributed significantly to the capital formation of the Maltese economy, as on average they accounted for 7% of total investment over the period reviewed. While experiencing a general upward trend in the share of communications investment to total investment, chart (b) shows a surge in the years 2000 and 2001.

These are mainly attributable to developments in the mobile telephony market, such as the initial investment of a new entrant in 2000 and a network upgrade of another operator in 2001. Furthermore, the fixed telephony operator undertook substantial capital maintenance during the latter year. Since these levels of investment were not repeated during the subsequent years, the ratio of investment in communications to gross fixed capital formation was estimated to have fallen to around 6.5% during 2002 and 2003.



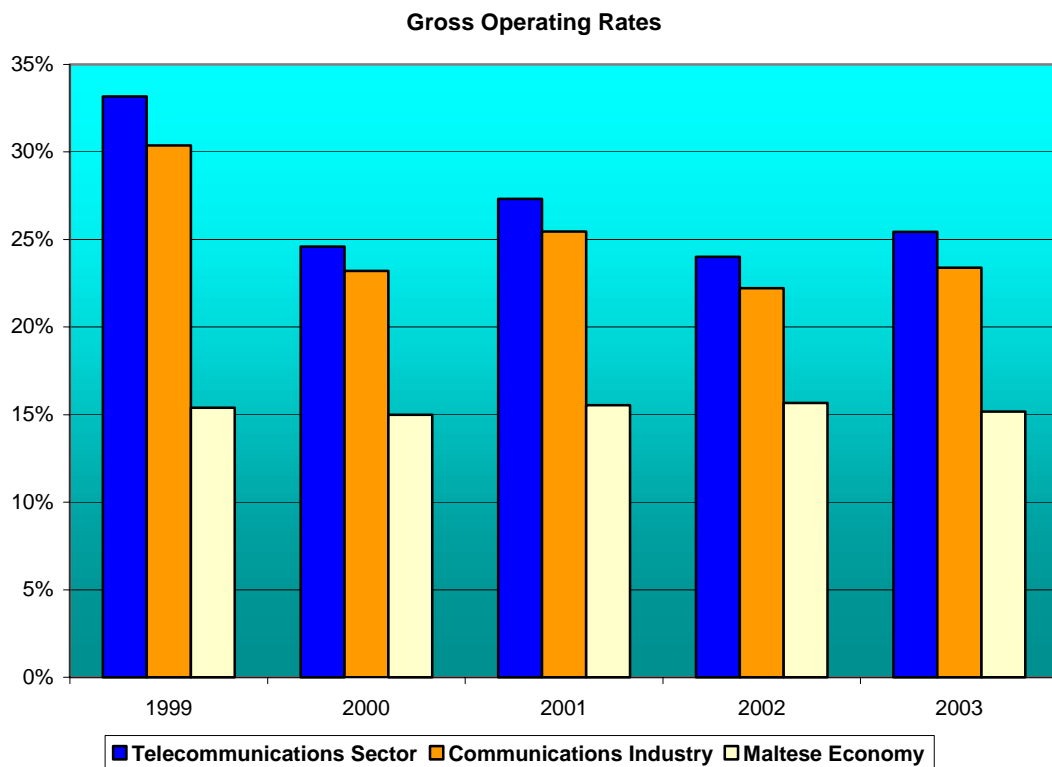
Sources: NSO; MCA estimates

The industry is also characterised by high profitability rates. Chart (a) compares the gross operating rates (GORs) of the communications industry with that of the general economy⁷. The GOR measures profitability by showing how much of the value added is left after the labour component of production has been compensated, as a percentage of total turnover.

As shown in the chart, this measure shows that the profitability of the communications sector has roughly been twice that recorded for the economy overall. Although market imperfections exist in the industry, which might permit higher profit margin, these rates reflect also the operators' underlying production function. Indeed, as mentioned earlier, being highly capital intensive, the communications industry has to compensate more the capital factor input. At the same time, the existence of economies of scale in the sector may permit lower unit costs, and hence higher profits.

⁷ Gross operating balances (excluding mixed income) for the Maltese economy from 2001 to 2003 are MCA estimates

In fact, high profitability rates do not just feature in the local scenario, as the GOR of the telecommunications sector for the EU15 in 2000 (which is the most recent year for which comparable data is available) stood at 25.8%⁸, 1.2% higher than the rate recorded locally for the same year.



Sources: NSO;MCA estimates

⁸ 'Information Society Statistics – Pocketbook 2003'; Eurostat (2003)

8 REGULATORY DEVELOPMENTS IN MALTA

The key regulatory development since the last market review report was the launch in February 2004 of a White Paper entitled “**A New Regulatory Framework for the Telecommunications Market**”. This new legal framework should provide the Authority with the right tools to facilitate the creation of a level playing field, while ensuring that regulatory obligations are lifted as soon as a market becomes effectively competitive.

The White Paper proposes significant changes to the Telecommunications (Regulation) Act. It proposes new rules, regarding authorisations, market analysis, the imposition of regulatory obligations on market players having significant market power and users’ rights, amongst others. It also establishes new rules regarding the management of radio frequencies.

Effectively it will facilitate the removal of barriers to entry in non-competitive markets; create greater legal clarity to enable market players to plan on the basis of predictable outcomes and harmonise local legislation with EU legislation for the electronic communications.

Amendments to the Malta Communications Authority Act were also proposed. These focus more specifically on the powers and obligations of the Authority. An important amendment establishes a Communications Appeals Board, which will be competent to hear appeals resulting from decisions of the Authority. It is furthermore significant to note that these amendments also propose the use of the term *electronic communications* in lieu of the traditional term *telecommunications*. In doing so Government, in line with the *acquis*, is striving to have a technology neutral authorisation.

The amendments being proposed deal only with primary legislation and therefore set out only the principles that will apply in this sector. Subsidiary legislation to accompany the proposed amendments is also being drawn up.

Following the consultation period, the submissions received by the Ministry were reviewed and the proposed amendments revised as appropriate. A Bill containing the new legislative framework was later published in April and is currently being discussed in Parliament. (For further details please [click here](#))

8.1 Decisions

8.1.1 Itemised billing (Amendment)

An amendment to the decision published in 2002 was issued in February 2004.
[Itemised Billing Decision \(Amendment\)](#)

8.1.2 Tariff approval procedures

In December 2003 the MCA published its decision notice on [Tariff Approval Procedures - Administrative Guidelines](#). This document captures the MCA's final position, following a consultation in February 2003, on the administrative procedures to be followed when introducing new tariffs for telecommunications services.

It offers guidance to operators on administrative issues such as the content of tariff applications, timeframes for submitting tariff applications, and procedures to be followed when introducing special offers.

8.2 Consultative Papers

8.2.1 Introduction of Number Portability

In October 2003 the MCA published a consultative document on number portability. Two types of Number Portability are being proposed - Operator Number Portability which refers to the ability of end-users to retain their telephone number when changing their service provider, and Location Number Portability which is a facility whereby subscribers could retain the same telephone number when moving from one physical location to another.

Changing telephone numbers can cause major inconveniences to both businesses and residential end-users. Number portability reduces such inconvenience and provides significant benefits.

[Introduction to Number Portability in Malta - Consultative Paper](#)

8.3 Legislation

8.3.1 Legal notice 303 of 2003 - Access to Internet services – extension of deadline

IN October 2003 the Authority issued a directive as per Legal Notice 2003 of 2003 requiring that access to any Internet service must be made by using the numbers

within the ranges of 2188XXXX or 2186XXXX unless otherwise stipulated by the Authority.

Operators providing such services had to comply by the 2nd February 2004. This date was subsequently extended to the 1st April 2004. All Internet Service Providers were expected to ensure that they would be fully compliant with the requirements of the aforesaid Directive.

[Access to Internet Services](#)

8.3.2 Legal notice 15 of 2004

In January 2004, the MCA issued a notice of the coming into force of the [Telecommunications \(Personal Data and Protection of Privacy\) Regulations 2004](#) as from the 1st April 2004.

8.3.3 Legal notice 277 of 2003

In October 2003, the MCA issued a notice of the coming into force of the [Telecommunications \(Unbundled Access to the Local Loop\) Regulations 2003](#).

8.4 List of Publications

8.4.1 Principle of implementation and best practices (PIBS)

The MCA published on its website a paper highlighting the *Principle of Implementation and Best Practices (PIBS)* for the application of remedies in Mobile Voice Termination Market in January 2004. This paper was developed by the Independent Regulators Group (IRG) in November 2003. The PIBS were devised by the IRG to assist in the process of harmonization of implementation of remedies in IRG member states. The PIBs on the application of remedies in the mobile wholesale voice call termination market give guidance to National Regulatory Authorities for a common approach towards the use of remedies on competition problems in this market.

[PIBS on Mobile Termination](#)

8.4.2 Annual report and financial statements

In December 2003 the MCA published its [Annual Report and Financial Statements](#) for 2003.

8.4.3 Guidelines on legal notice 202 of 2003: General authorisations (Private Telecommunications Systems and Services) regulations

The purpose of this document issued in October 2003 is to provide guidelines with respect to the authorisation of private telecommunications systems and/or services in line with the provisions of the Telecommunications (Regulation) Act and Legal Notice 202 of 2003.

Given the advent of liberalisation in the sector it was necessary to provide insight on the matter of private telecommunications systems and services, as these were not allowed prior to January 2003.

The publication states that such private systems and services will require only a general authorisation.

[Guidelines on L.N. 202/2003: General Authorisations Regulations](#)

8.4.4 Strategic plan 2002 - 2005 update

This is an update to the document that was issued in July 2002, which outlines the MCA's strategic direction for the forthcoming years and is the basis for the Authority's regulatory activities.

[Strategic Plan 2002 - 2005 Update](#)

In November 2003 the MCA hosted its Annual Conference with the theme

“Next Generation Networks: New Technologies, New Services, New Revenue Models”

The purpose of the conference was to create a forum for discussion in order to address specific challenges and assess opportunities of the next generation of networking technologies. The role of the MCA was extended beyond the traditional remit and focuses on stimulating increased investment and competition in the sector at a time when operators and service providers need to maximise efficiency due to the severe challenges currently being faced. During the conference exhibitions and live demonstrations of the latest developments in technology by companies such as Siemens International, Alcatel and Euroweb, together with the networking session, proved very successful. Participants were given the opportunity to interact informally and discuss proceedings or do business.

The high degree of interest shown in this conference was clearly indicated by the large number of registrations, with attendees visiting from all over Europe, as well the US.

9 INTERNATIONAL ANALYSIS

9.1 International Regulatory Developments

In December 2003 the 9th Report on the Implementation of the EU Electronic Communications Regulatory Package was published on the MCA's website. The report provides a detailed review of the progress achieved in the implementation of the new regulatory package which came into force in July 2003 and which brought about a complete overhaul of the first telecommunications package, by which markets were liberalised in 1998.

The report indicates that the sector appears to be overcoming the difficult economic circumstances experienced over recent years with broadband and mobile subscriptions as the main drivers of this growth.

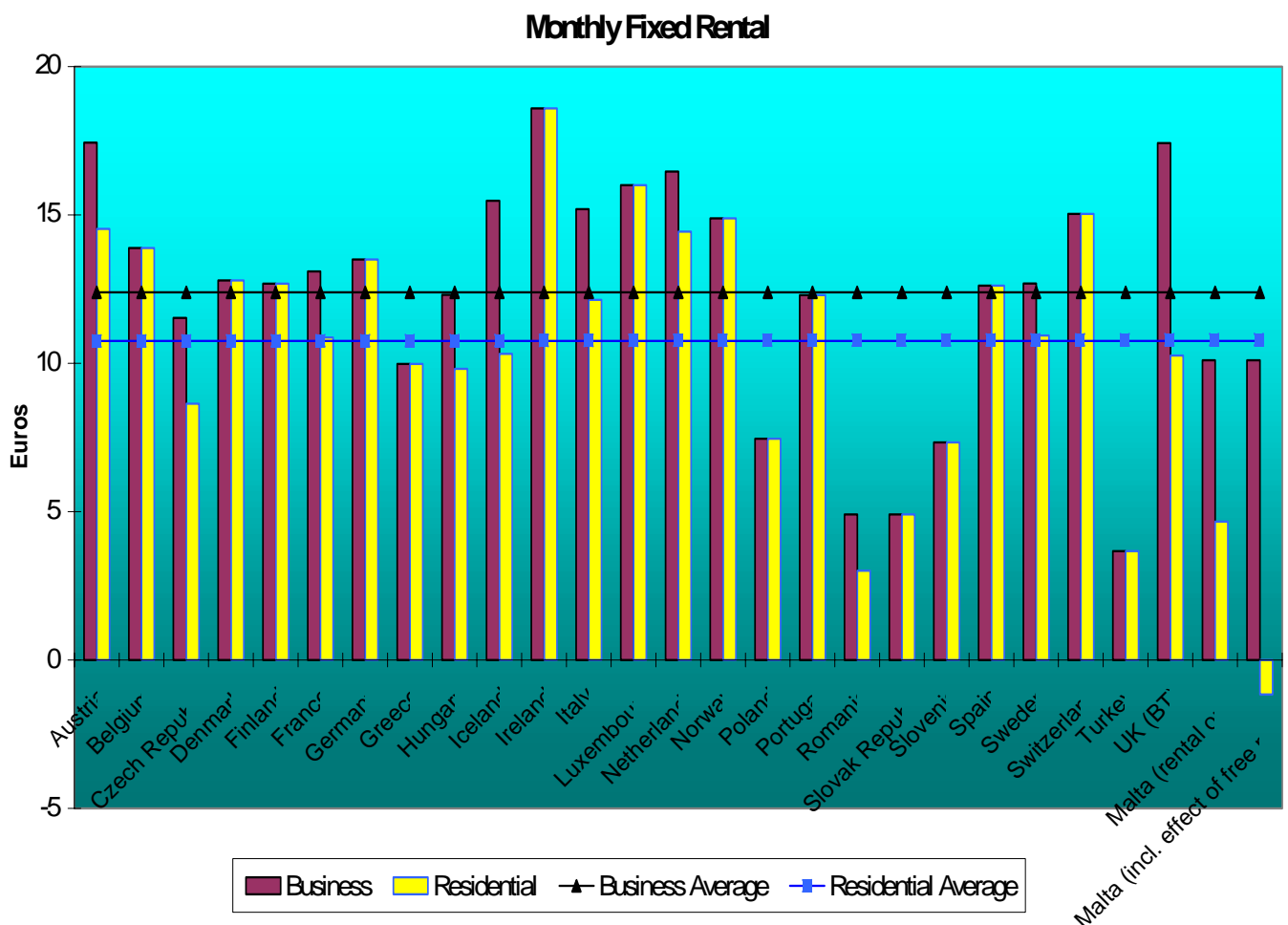
9.2 EU Benchmarking of Retail Tariffs

9.2.1 Monthly fixed line rentals

The chart represented hereunder shows the monthly line rentals recorded by European Fixed Line operators. The average residential rate is of €12.40, whilst that for Business is €10.75.

The residential comparison reflects two scenarios for Malta. One scenario is the actual rental, whilst the second includes the financial impact of the free pulses. The latter implies a 'negative' rental as the value of the free pulses exceeds the monthly rental fee.

(These are the tariffs prior to the Maltacom tariff adjustments in June 2004.)

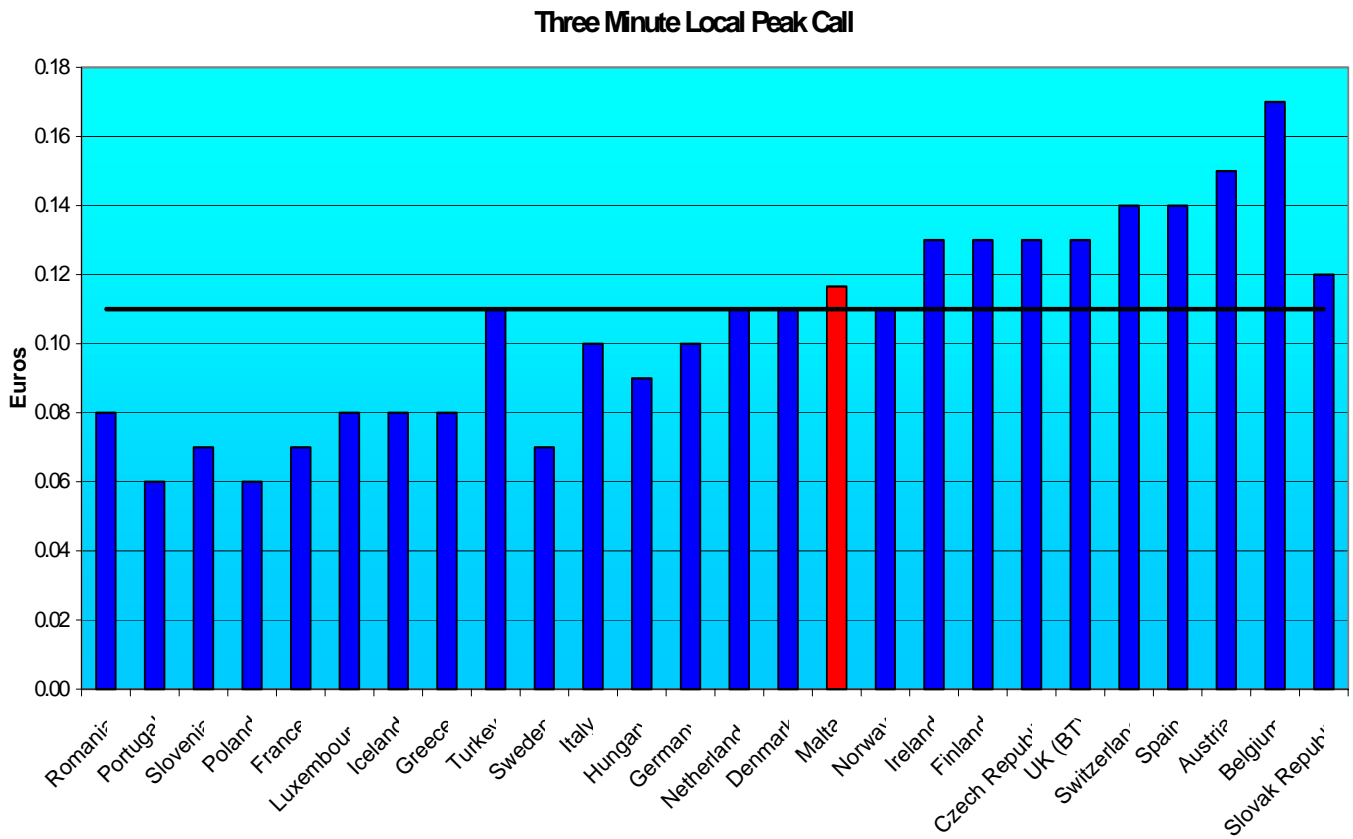


Source: Tarifica

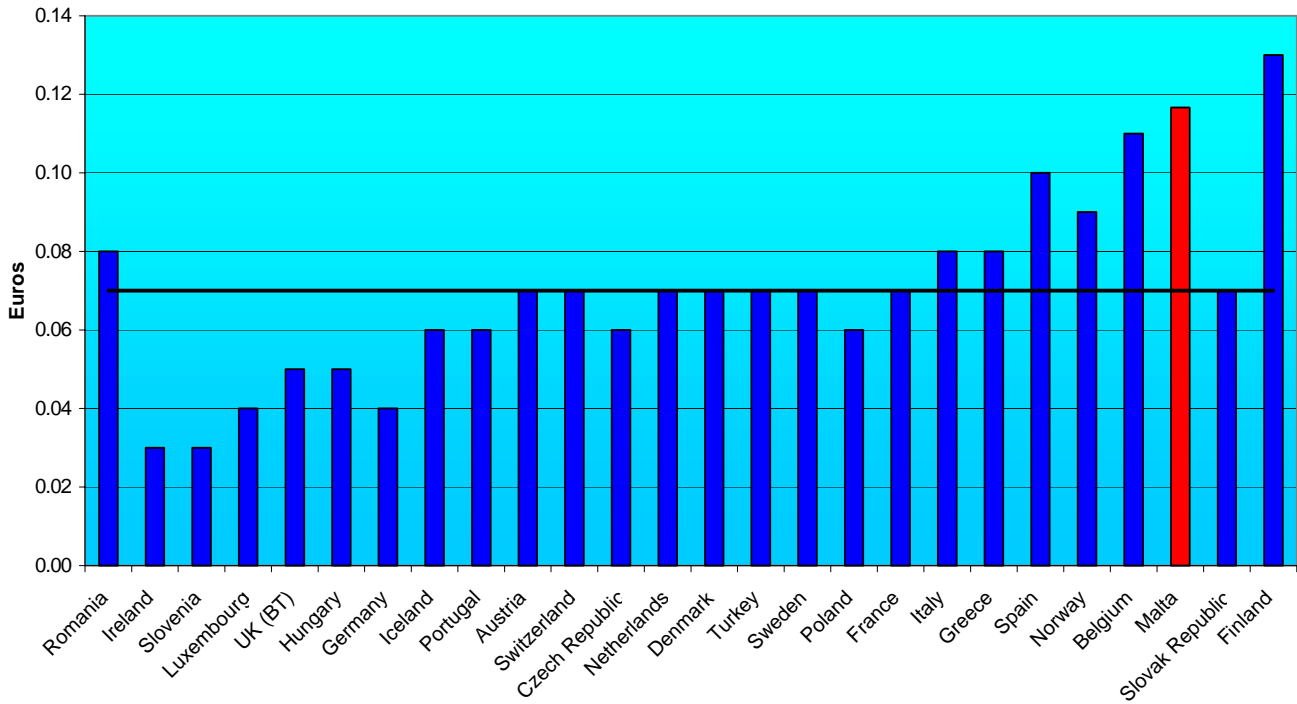
9.2.2 Local fixed line call tariffs

The following charts illustrate the retail charges by European Fixed Line operators for a three-minute local call. The first chart reflects the cost of the call (excluding tax) during peak periods whilst the second one shows the cost of the same call during off-peak periods.

Due to the local 'pulse'-billing billing concept, the cost of a three-minute local call is the same for both peak and off-peak periods. However, this does affect Malta's position in relation to the EU average. Indeed Malta's tariffs are just above the average for peak calls and significantly higher in off-peak periods.



Three Minute Local Off-Peak Call

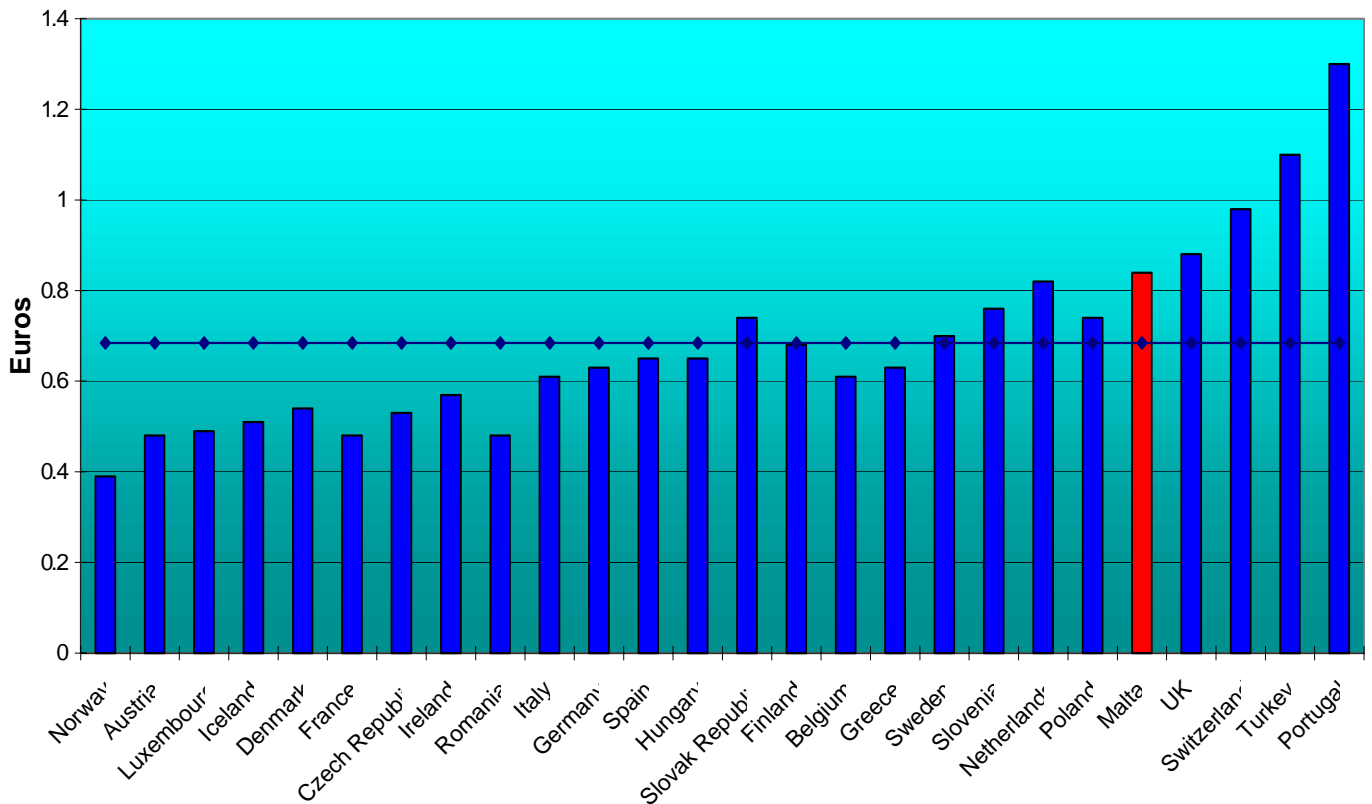


Source: Tarifica

9.2.3 Fixed to mobile calls

The chart below reflects the rates charged by fixed-line operators for a three-minute call originating from a fixed line to a mobile network. The average cost for this call is 0.68 euros, which is slightly above the rates charged locally.

Three Minute Call from Fixed to Mobile

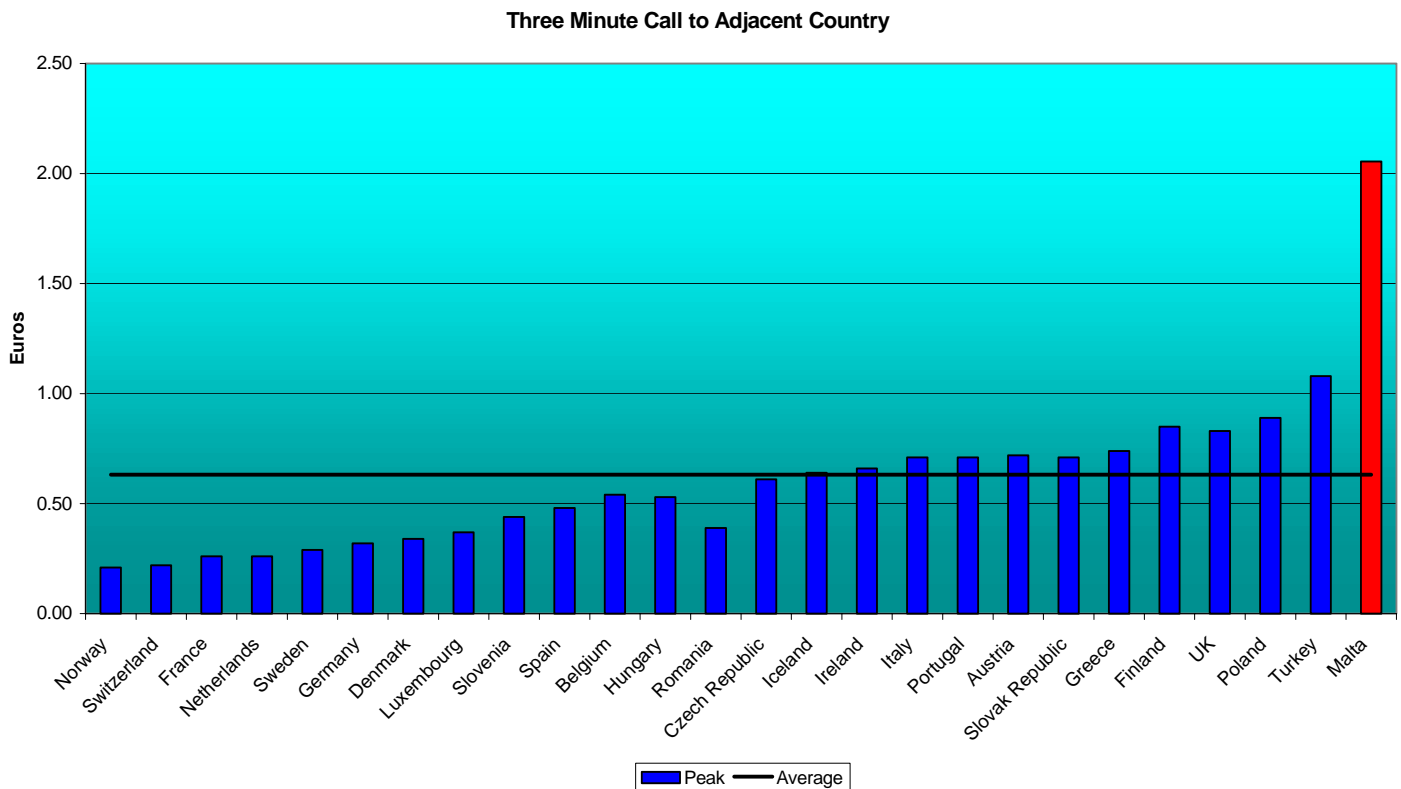


Source: Tarifica

9.2.4 International fixed call tariffs (to a near country)

The graph below indicates the cost of an international 3-minute call to an 'adjacent country'. In Malta's case this would be Zone 1 which includes Italy. As can be seen from this chart, Malta had the highest cost of all the EU countries listed below, as at March 2004. This leads the local tariff to exceed by far the EU average, which stood at €0.63.

(The local tariffs do not take into consideration the reduction in international rates by Maltacom in June 2004.)



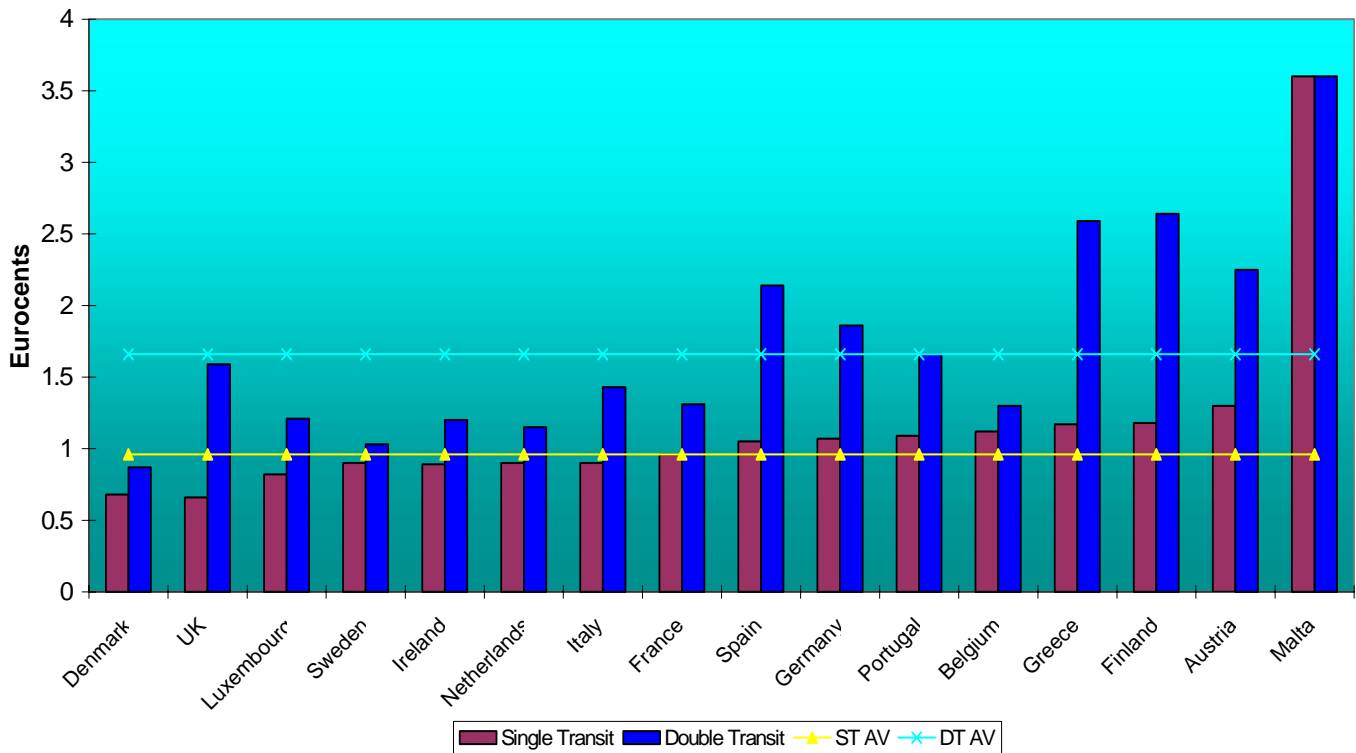
Source: Tarifica

9.3 EU Benchmarking of wholesale tariffs

9.3.1 Fixed termination charges

The chart below indicates the per-minute fixed termination charges in EU countries as at March 2004. The local average fixed interconnection rate of Lm0.0155, which was reduced in October 2003, is still exceptionally high when compared to interconnection charges in other European countries.

EU Fixed Termination Rates

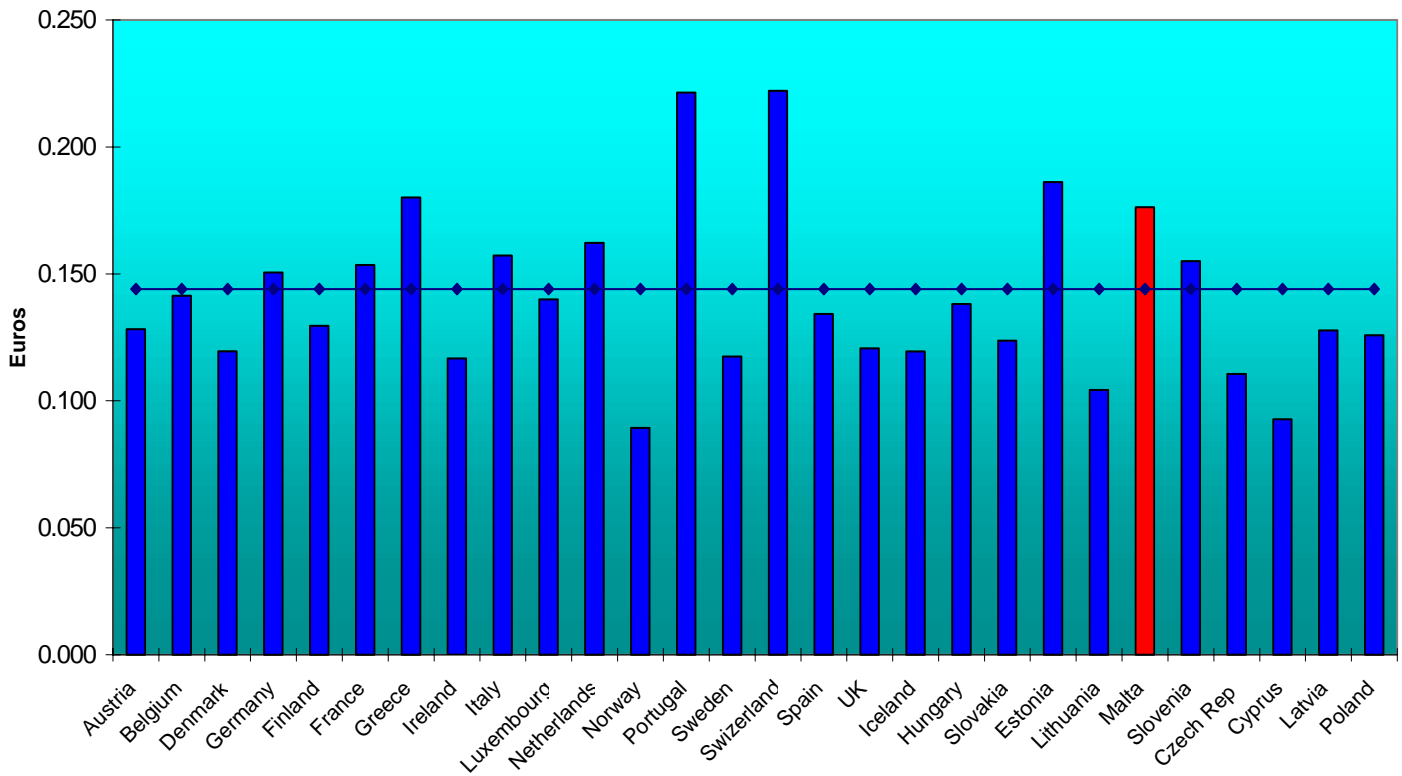


Source: EU

9.3.2 Mobile termination charges

The following illustration shows the mobile termination charges applicable in European countries, together with the local rates. As can be seen from the chart, the local mobile termination charges are slightly above the EU average.

European Average Mobile Termination Rates



Source: EU