

---

**Transit services in the fixed public telephone network**  
*Identification and analysis of markets,  
determination of market power & the setting of remedies*

**Response to Consultation Document and Final Decision**

<b>Document No:</b>	MCA/D/11-0632
<b>Date:</b>	23 November 2011

## Contents

<b>EXECUTIVE SUMMARY .....</b>	<b>1</b>
<b>1. INTRODUCTION .....</b>	<b>3</b>
SCOPE OF THIS REVIEW .....	3
REGULATORY INSIGHT .....	3
METHODOLOGY APPLIED FOR MARKET DEFINITION AND MARKET ANALYSIS .....	5
BACKGROUND TO CURRENT MARKET REVIEW .....	6
<b>2. MARKET DEFINITION .....</b>	<b>10</b>
EVOLUTION OF THE LOCAL FIXED NETWORK MARKET .....	10
DESCRIPTION OF CURRENT FIXED ACCESS NETWORK TOPOLOGIES .....	11
DETERMINING WHAT FALLS WITHIN THE SCOPE OF THIS MARKET REVIEW .....	12
THE TRANSIT ELEMENT OF AN END-TO-END CALL PATH IN MALTA .....	13
THE SUBSTITUTABILITY OF WHOLESALE TRANSIT SERVICES PROVIDED OVER DIFFERENT FIXED ACCESS NETWORK PLATFORMS .....	14
THE POTENTIAL FOR WHOLESALE TRANSIT SERVICES TO BE PROVIDED BY LOCAL MNOS .....	15
THE RELEVANCE OF SELF-SUPPLIED TRANSIT SERVICES.....	16
DISTINGUISHING BETWEEN TYPES OF TRANSIT SERVICES .....	17
DISTINGUISH BETWEEN TRANSIT SERVICES TO NATIONAL NUMBERS AND TRANSIT SERVICES TO INTERNATIONAL NUMBERS .....	18
THE SUBSTITUTABILITY OF WHOLESALE LEASED LINE SERVICES AND DIRECT INTERCONNECTION WITH WHOLESALE TRANSIT SERVICES .....	21
RELEVANT GEOGRAPHIC MARKET(S).....	22
RESPONSE TO CONSULTATION ON MARKET DEFINITION .....	22
CONCLUSION ON THE MARKET DEFINITION EXERCISE .....	23
<b>3. MARKET ANALYSIS .....</b>	<b>24</b>
ASSESSMENT OF THE FIRST CRITERION .....	24
ASSESSMENT OF THE SECOND CRITERION .....	29
ASSESSMENT OF THE THIRD CRITERION .....	36
CONCLUSIONS BASED ON THE FINDINGS FROM THE THREE CRITERIA TEST .....	37
<b>4. REGULATION .....</b>	<b>38</b>
BACKGROUND TO REGULATION .....	38
EXISTING OBLIGATIONS.....	38
DECISION ON REGULATORY INTERVENTION .....	39
FUTURE MONITORING AND REVIEWING OF WHOLESALE TRANSIT MARKETS .....	39
<b>ANNEX .....</b>	<b>40</b>

## Executive Summary

The Malta Communications Authority (hereafter, 'the MCA') is hereby presenting its final decision on the markets for the provision of wholesale fixed transit services in Malta, following the notification of its draft measure to the European Union Commission (hereafter 'the EU Commission') in October 2011.

Pursuant to Article 7(3) of the Framework Directive, national regulatory authorities (NRAs), the Body of European Regulators for Electronic Communications (BEREC) and the Commission may make comments on notified draft measures.

In its letter dated 14<sup>th</sup> November 2011<sup>1</sup>, the EU Commission has no comments on the said draft measure notified by the MCA.

This decision follows an earlier national consultation<sup>2</sup> exercise carried out between the 18<sup>th</sup> of July and the 31<sup>st</sup> of August 2011. In their submission to consultation both GO plc. [hereafter "GO"] and Vodafone Malta Ltd. [hereafter "Vodafone"] express general agreement with the MCA's main findings and conclusions put forward for consultation. In line with its obligations, the MCA also consulted with the Office for Competition (hereafter, 'the OC')<sup>3</sup> within the Malta Competition and Consumer Affairs Authority (hereafter, 'the MCCA').

### *Market definition*

The current review considers that, notwithstanding the developments since the previous market review<sup>4</sup> and the substitutability analyses conducted to date, the 2006 conclusions concerning the existence of a wholesale national transit market and a wholesale international transit market in Malta remain valid.

Based on a demand-side and supply-side substitutability analysis, the MCA notes that GO, Melita plc. [hereafter "Melita"] and Vodafone are currently offering substitutable wholesale national transit services and that, in the event of a hypothetical monopolist implementing a small but significant increase in price ("SSNIP") for such services, another operator namely SKY Telecom may start offering such services sufficiently quickly and without significant additional costs.

The MCA therefore concludes that national transit services provided by all the above-mentioned operators fall in the same market.

The MCA also deems that the provision of wholesale national transit services features appreciably different competitive conditions than those observed for the provision of wholesale international transit services. Given that Malta is an island, international transit requires a link to mainland Europe which results in different competitive conditions for the provision of international transit services.

---

<sup>1</sup> Link to EU Commission no comments letter: <http://www.mca.org.mt/article/eu-commission-comments-mca-notification-regarding-transit-services-fixed-public-telephone>

<sup>2</sup> In accordance with Article 6 of the Framework Directive.

<sup>3</sup> The OC was formerly known as the Office of Fair Competition ('OFC').

<sup>4</sup> Link to MCA Decision regarding wholesale call origination, call termination and transit services provided over fixed electronic communications networks, published in September 2006 (referred to as 'the 2006 Decision' in the current review):

[http://www.mca.org.mt/sites/default/files/articles/Wholesale\\_call\\_OrigTerm%26TransFixed.pdf](http://www.mca.org.mt/sites/default/files/articles/Wholesale_call_OrigTerm%26TransFixed.pdf)

The MCA therefore identifies a separate market for international transit services. The network operators currently providing international transit services are GO , Vodafone , and Melita .

The MCA concludes that the said operators are currently offering substitutable wholesale international transit services.

Wholesale leased lines, and physical direct interconnection do not fall within the scope of any of the identified markets, as these are not directly substitutable with wholesale transit services. However, the MCA still considers that direct interconnection poses an indirect constraint on the provision of wholesale national transit services. The impact of such indirect constraint is taken into account at the market analysis stage.

The relevant geographic market for the provision of national and international transit services at a fixed public location in Malta is national in scope. All authorised operators providing wholesale transit services are doing so without actually differentiating - in terms of pricing and availability - on the basis of geographic location.

### *Market analysis*

The revised EU Recommendation does not list the 'market for wholesale transit services' as a market susceptible to *ex ante* regulation.

Given the current regulatory mandate governing the provision of wholesale international transit services, local market developments and the changes in the EU Recommendation, the MCA carries out a three criteria test to determine whether Malta's national circumstances require a different conclusion.

In its assessment, the MCA determines that:

- ✦ the two identified wholesale transit markets are effectively competitive (this reconfirms the MCA's 2006 Decision concerning the provision of wholesale national transit services and determines that the market for the provision of wholesale international transit services is no longer subject to the presence of high and non-transitory barriers to entry);
- ✦ the provision of wholesale national and international transit services in Malta is expected to remain effectively competitive within the timeframe of this review; and
- ✦ Competition Law by itself is adequate to ensure that wholesale transit services are offered at competitive conditions.

### *Regulatory approach*

On the basis of the findings at the market analysis stage, the MCA concludes that:

- ✦ *ex ante* regulatory intervention is not warranted in any of the identified markets and, as a result, no operator is designated with significant market power (hereafter, 'SMP') in the provision of wholesale national and/or international transit services; and
- ✦ existing regulation in the market for international transit is to be withdrawn accordingly.

## 1. Introduction

### *Scope of this review*

This document sets out the Malta Communications Authority's (hereinafter, "the MCA" or "the Authority") definition of the market(s) for wholesale transit services in the fixed public telephone network in Malta.

The term 'wholesale transit' encompasses those activities which go beyond, but are complementary to, activities identified within the parameters of wholesale call origination and wholesale call termination.

The EU Commission Recommendation on Relevant Markets Susceptible to *Ex-Ante* Regulation (hereafter, also referred to as 'the Recommendation' or 'the EU Recommendation') refers to wholesale transit services as the: '*(long distance) conveyance of switched calls on the public network provided at a fixed location*'. It also underlines that '*transit services therefore comprise conveyance both between switches on a given network and between switches on different networks, and including pure conveyance across a third network*'.

In this context, the current review outlines and assesses:

1. the availability of network elements necessary for the provision of wholesale transit services, describing the current network topologies and market conditions in the process;
2. market dynamics in view of past developments and foreseeable changes;
3. the capability of existing network operators to provide geographically ubiquitous transit services for self-supply and/or merchant offers;
4. current and potential competition conditions of the identified wholesale transit markets; and
5. the regulatory approach to be adopted in view of review findings.

Throughout this document, the MCA takes utmost account of the EU Recommendation<sup>5</sup>, which identifies those product and service markets within the electronic communications sector defined as being susceptible to *ex ante* regulation as set out in the specific Directives, and the 'Guidelines for market analysis and the assessment of significant market power' (hereafter 'the SMP Guidelines').

### *Regulatory insight*

The EU Regulatory Framework for Electronic Communications (hereafter, also referred to as 'the Electronic Communications Framework'<sup>6</sup> or 'the Framework') sets out the regulatory framework that applies to electronic communications, including telecommunications, access to the Internet and email, and access to broadcasting and content related matters.

---

<sup>5</sup> Link to Recommendation: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2007:344:0065:0069:EN:PDF>

<sup>6</sup> Transposed into Maltese legislation on 14th September 2004.

The Framework is intended to set the ground rules for the consistent application of regulation and competition in relation to electronic communications networks and services across all EU Member States.

The fundamental regulatory rules and objectives in the eCommunications Framework are read across five directives as follows:

- ✦ Directive 2002/21/EC on a common regulatory framework for electronic communications networks and services (“the Framework Directive”);
- ✦ Directive 2002/19/EC on access to, and interconnection of, electronic communications networks and associated facilities (“the Access Directive”);
- ✦ Directive 2002/20/EC on the authorisation of electronic communications networks and services (“the Authorisation Directive”);
- ✦ Directive 2002/22/EC on universal service and users' rights relating to electronic communications networks and services (“the Universal Service Directive”); and
- ✦ Directive 2002/58/EC concerning the processing of personal data and the protection of privacy in the electronic communications sector (“the Privacy Directive”).

The Framework Directive sets out three key policy objectives of regulation namely the promotion of competition, the development of the internal market, and the promotion of the interests of the citizens of the EU. In accordance with this Directive, the EU Commission published a revised version of the Recommendation<sup>7</sup> on relevant markets on 17 December 2007, defining seven relevant markets susceptible to *ex ante* regulation, instead of 18 as specified in the previous recommendation.

The Authorisation Directive establishes a system whereby any person will be generally authorised to provide electronic communications services and/or networks without prior approval. The general authorisation replaces the former licensing regime.

The Universal Service Directive defines a basic set of services that must be provided to end-users.

The Access and Interconnection Directive sets out the terms on which providers may access each others' networks and services with a view to providing publicly available electronic communications services.

The Directive on Privacy establishing users' rights with regard to the privacy of their communications was transposed following the making of two separate laws, the Processing of Personal Data (Electronic Communications Sector) Regulations made under the Data Protection Act<sup>8</sup> and the Electronic Communications (Personal Data and Protection of Privacy) Regulations made under the Electronic Communications (Regulation) Act<sup>9</sup>. The latter regulations have since been repealed<sup>10</sup> and replaced by Part

---

<sup>7</sup> The EU Commission Recommendation originally came into force in July 2003 (Rec. 2003/311/EC). After having been in force for more than four years, the Recommendation came up for review and was eventually published in its current form in December 2007. The European Commission adopted the Recommendation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications and services. The Recommendation is accompanied by an “Explanatory Note” providing the ‘background to the review and revision of the Recommendation’ and the basis for identifying and analysing the markets relevant for the purposes of *ex ante* regulation.

<sup>8</sup> See S.L. 440.01. These Regulations were brought into force on the 15 July 2003.

<sup>9</sup> These regulations came into force on the 1<sup>st</sup> April 2004.

VIII entitled “Protection of Privacy” under the Electronic Communications Networks and Services (General) Regulations of 2011.<sup>11</sup>

The Maltese legislation transposing the amended version of the said directives came into effect on 12 July 2011. The relevant national legislation are the Malta Communications Authority Act (Cap 418), the Electronic Communications (Regulation) Act (Cap. 399) (hereinafter referred to as ‘ECRA’); and the Electronic Communications Networks and Services (General) Regulations of 2011 (hereinafter referred to ‘ECNSR’). The Directives require National Regulatory Authorities (NRAs) such as the MCA to carry out reviews of competition in communications markets to ensure that regulation remains appropriate in the light of changing market conditions.

The Framework Directive obliges the national regulatory authority (hereafter “ the NRA”) of Member States to carry out regular reviews of product and service markets within the electronic communications sector. It also sets out the procedure and requirements to be followed when undertaking market reviews.

The NRA is required to define relevant markets appropriate to national circumstances, including the relevant geographic markets, in accordance with the principles of competition law, and to impose, maintain, amend, or withdraw regulatory obligations in the light of ongoing changes in market conditions.

More detailed requirements and guidance concerning the conduct of market reviews are provided in the Directives, the ECRA, and the ECNSR, together with other documents issued by the European Commission and the MCA.

### ***Methodology applied for market definition and market analysis***

The current review takes utmost account of the Recommendation, the “Explanatory Note”<sup>12</sup> accompanying this Recommendation, and the “Guidelines for market analysis and the assessment of significant market power” referred to in Article 15(2) of the Framework Directive as also stipulated by regulation 6 of the ECNSR.

The review’s methodology also takes into account the MCA’s “Market Review Methodology”<sup>13</sup>, which elaborates on the criteria used in assessing competition in Maltese electronic communications markets.

The market assessment is supported by market data, which is collected from various internal and external sources, including users and providers of electronic communications networks and services and from regular consumer surveys.

As required by article 4A of the Malta Communications Authority Act, the MCA published the results of this market review for national consultation, thereby providing operators the opportunity to comment on the findings prior to the MCA adopting the final proposals.

---

<sup>10</sup> See regulation 93 of L.N. 273 of 2011.

<sup>11</sup> See regulations 57 to 64..

<sup>12</sup> Link to “Explanatory Note”:  
[http://ec.europa.eu/information\\_society/policy/ecomm/doc/implementation\\_enforcement/eu\\_consultation\\_procedures/sec\\_2007\\_1483\\_2.pdf](http://ec.europa.eu/information_society/policy/ecomm/doc/implementation_enforcement/eu_consultation_procedures/sec_2007_1483_2.pdf)

<sup>13</sup> Link to MCA market review methodology:  
<http://www.mca.org.mt/sites/default/files/articles/marketreviewmethod.04.pdf>

This analysis is also undertaken, as appropriate, on agreement with the National Competition Authority (“NCA”)<sup>14</sup>.

Eventually, the MCA notified the Commission and the NRAs of other Member States with the outcome of the national consultation exercise, in line with regulation 7 of the ECNSR.

The Commission had no comments on the notified draft measure.

Had an opinion been expressed by the Commission that the notified draft measure created a barrier to the single market, or serious doubts expressed as to its compatibility with Community law and issues a notice under Article 7(4) of the Framework Directive, the MCA would then have been required to delay adoption of the notified measure for a further period of two months while the Commission considered its position<sup>15</sup>.

### ***Background to current market review***

The 2006 MCA Decision concerning transit services in the fixed public telephone network identifies:

- ✚ a market for the provision of wholesale national transit services in the fixed public telephone network; and
- ✚ a market for the provision of wholesale international transit services in the fixed public telephone network.

A further analysis of the identified markets revealed that the market for international transit services in the fixed public telephone network met the conditions set by the ‘three criteria test’. The market exhibited significant barriers to entry, mainly of a structural and financial nature.

Only two network operators had the necessary commercial, technical and operational arrangements to adequately provide interconnection capacity to third party operators for the conveyance of international traffic. These were the incumbent GO (then known as Maltacom plc.) and Vodafone.

However, GO’s market position was not constrained by Vodafone, as the latter operator was not conveying third party international transit traffic over its network infrastructure. In this scenario, the MCA concluded that it was not foreseeing effective competition to materialise within the timeframe of the review and designated GO with SMP in the provision of wholesale international transit services.

As a result, the MCA imposed a number of regulatory obligations on GO, namely an obligation on access to specific facilities of the operator’s network, transparency, non-discrimination, cost orientation, cost accounting systems, and accounting separation.

Of particular relevance at this stage are the developments in the transit markets that occurred since 2006 namely that:

---

<sup>14</sup> In line with the cooperation agreement signed on the 20<sup>th</sup> May 2005 between the MCA and the OC (formerly known as the Office of Fair Competition, or the “OFC”), the MCA concluded a two week consultation process with this entity. The official position of the OC has been presented in writing and is being made available to the general public.

<sup>15</sup> This is in accordance with Regulation 6 of the ECNSR.

Furthermore, pursuant to Article 7(5) of the Framework Directive, the MCA takes into full consideration the comments of other NRAs and the European Commission.



- ✚ Network topologies underwent significant changes as a number of communications providers (hereafter, also referred to as 'CPs') managed to negotiate commercial, technical and operational arrangements with GO to facilitate interconnection. Some have even deployed their own network and interconnected directly with GO and other operators at the local level, thereby increasing their options from where to route their domestic traffic.

At the international level, significant investment has been undertaken by GO and Melita. Melita commissioned an undersea cable in 2008 covering a distance of around 100kms, linking St. Paul's Bay to Pozzallo in Sicily. Cable laying works were completed in 2009. The deployment of Melita's submarine cable effectively meant that this operator became self-sufficient in that it could meet its own demand for international transit services. On a national level, this latest deployment also meant that Malta is effectively connected to mainland Europe via three submarine cables, each owned by a different operator.

During the same period of Melita's deployment, GO also deployed its second undersea cable, which was laid down between St. Paul's Bay to Mazara Del Vallo in Sicily. Cable laying works were completed in 2009, covering a distance of 290kms. This investment was undertaken to increase significantly the international capacity of GO and also to ensure the integrity and resiliency of the network, given that the first cable is reaching its end of life after 20 years in operation.

- ✚ The evolution to Next Generation Networks (hereafter, also referred to as 'NGNs') was more consistent and tangible. GO upgraded its fixed PSTN network infrastructure to an NGN setup<sup>16</sup>. Instead of having a circuit-switched core network based on two International Switching Centres and thirteen primary switches, three of which configured to function also as tandem switches, GO is now able to cover the national territory with four fully-meshed media gateways.

With respect to the rollout of NGNs, the multiplicity of technologies remained a distinctive feature of Malta's domestic market. In fact, Melita's cable infrastructure is also deployed in an NGN set up.

Broadband wireless access (hereafter, also referred to as 'BWA') operators, namely SKY Telecom and Vodafone, have also moved towards NGN, and are now able to cover the national territory with a small number of interconnection points. Vodafone rolled out its WiMAX network in June 2008, using the fixed broadband standard or D-standard.

SKY Telecom rolled out its BWA network, SKYNet, in 2008. This network uses a proprietary Motorola standard – PTP600 – which provides an air interface totally independent of WiMAX BWA and operates in the 5.4Ghz 'unlicensed' band.

- ✚ All CPs are now directly interconnected with GO at the local exchange level and with each other, with the exception of two small communications providers namely Solutions and Infrastructure Services Ltd. (hereafter, also referred to as 'SIS') and SKY Telecom's CS/CPS retail arm.

SIS has an interconnection agreement with GO, which allows it to route traffic via GO for termination on other fixed and mobile networks.

---

<sup>16</sup> Since NGNs rely on packet-based rather than circuit-switched solutions, NGNs are more streamlined in the way calls are conveyed over such infrastructure.

SKY Telecom's CS/CPS retail arm, which is hosted on GO's network and is therefore currently routing all national and international traffic via this operator's media gateways.

Another development since 2006 concerns the revision in the EU Commission Recommendation. In 2007, the number of electronic communications markets listed in the Recommendation as being susceptible to *ex ante* regulation were reduced from 18 to 7.

In this regard, the previous version of the Recommendation listed the market for the provision of wholesale transit as one presumed to warrant *ex ante* regulation (formerly referred to as Market 10). However the revised version of the Recommendation removed this market from the list.

The European Commission underlines that, for the forward-looking period, the wholesale market for transit services does not in general satisfy the first criterion of the Three Criteria test. The Commission however notes that competition in this market is not likely to vary within and between Member States and that therefore it is possible for NRAs to regulate this market where this is justified by national circumstances in the sense that the three cumulative criteria are met, and where the Commission does not raise any objections.

The current review therefore assesses national and international transit against the Three Criteria test set out in the Recommendation. The assessment would either determine that the Three Criteria Test is fulfilled, thereby mandating the MCA to intervene and propose remedial measures, or else determine that (one of) the conditions set out by the Three Criteria Test are not fulfilled. In such case, the MCA would not have a duty to intervene in unregulated markets. Otherwise, the MCA would have to initiate the process of rolling back *ex-ante* regulation where SMP has been found in the previous review but has not been confirmed in the current assessment.

A further development to the above relates to the MCA Decision concerning the analysis of the markets for wholesale call origination and wholesale call termination services on individual public telephone networks provided at a fixed location.

The MCA Decision concerning 'wholesale call origination services provided over fixed networks' was published in January 2010<sup>17</sup>. The Decision concerning 'wholesale call termination on individual public telephone networks provided at a fixed location' was published in May of the same year<sup>18</sup>.

In view of these markets, the EU Commission Recommendation underlines that if call origination and call termination are already defined then a notional market for transit is also defined by default.

In the course of market definition for wholesale transit, the MCA therefore takes due account of the conclusions reached with respect to the definition of the call origination and call termination markets. These conclusions are briefly recalled below:

- ✦ Wholesale call origination services on the public telephone network provided at a fixed location include call set-up, switching and connection for the initial stage of

---

<sup>17</sup> Link to MCA Decision: [http://www.mca.org.mt/sites/default/files/articles/Decision-Wholesale\\_call\\_orig\\_FN.pdf](http://www.mca.org.mt/sites/default/files/articles/Decision-Wholesale_call_orig_FN.pdf)

<sup>18</sup> Link to MCA Decision: [http://www.mca.org.mt/sites/default/files/articles/M3\\_%28MT%29\\_FINAL\\_DECISIONV2.pdf](http://www.mca.org.mt/sites/default/files/articles/M3_%28MT%29_FINAL_DECISIONV2.pdf)

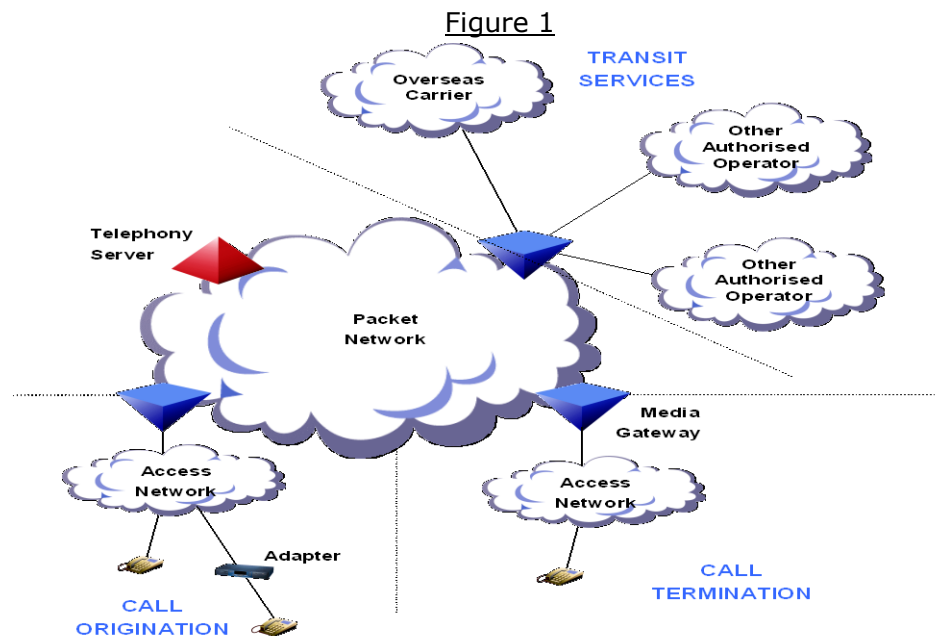
the call. It incorporates conveyance from an end-user to the next stage in the call routing process, either to the point of interconnection or to call termination.

- ✚ Wholesale call termination comprises call completion and the switching functionality at the terminating end of a call. They incorporate the conveyance of calls from the end of the previous stage (either call origination or to the point of interconnection), to the called end-user via the local loop.

The infrastructure and technology supporting wholesale call origination and call termination services is based on IP network architectures consisting in the most part of copper lines and hybrid fibre-coaxial cables via trenches/ducts, and BWA base stations operating on specific frequency bands. The different networks are owned by different CPs.

The relevant markets for wholesale call origination and call termination services are therefore multi-network markets.

The market boundaries highlighted above are depicted in Figure 1 below.



## 2. Market definition

The market definition exercise considers the structure and functioning of the market(s), taking into account past performance and current market realities, as well as expectations over the forward looking period of this review<sup>19</sup>.

As a starting point, the current review outlines developments in the infrastructure and technology supporting the provision of wholesale transit services. Reference is first made to the network topologies characterising the provision of wholesale transit in Malta. In the process the MCA intends to determine whether active communications providers (hereafter, "CPs") owning existing network topologies are capable of providing geographically ubiquitous services for self-supply and/or merchant offers.

### *Evolution of the local fixed network market*

Until 2003, the only CP providing fixed telephony services in Malta was GO (at the time known as Maltacom). As from 2004 onwards, the electronic communications sector witnessed significant investments. In 2004, Vodafone went ahead with its preparations to launch its own international gateway, a development which was expected to have a positive impact in the level and quality of services offered to both retail and wholesale customers.

Further developments were reported in 2005 and 2006 with Melita, the incumbent operator in the provision of cable television services, entering the fixed voice market for international calls with the launch of its 'Hello' Voice over internet protocol service (hereinafter, 'VoIP')<sup>20</sup> and GO introducing a similar VoIP service, 'Ten21'.

In October 2005, access to rights of use of radio frequencies for the development of BWA networks in Malta were also assigned to Cellcom<sup>21</sup>, GO Mobile and Vodafone (Malta), with these operators expected to complete their network rollout to achieve full national coverage within four years.

A year later, SKY Telecom launched its fixed voice telephony services under the brand name 'Sky' on a carrier select/pre-select (hereinafter, "CPS/CS") basis<sup>22</sup>. The year 2006 was also characterised by further investment in the mobile sector as GO Mobile and Vodafone (Malta) partially rolled out their Third Generation (3G) Network in line with obligations imposed on these operators in 2005<sup>23</sup> to completely roll out their 3G networks within five years.

---

<sup>19</sup> The Explanatory Note to the Recommendation states that '*As the market analyses carried out by the NRAs have to be forward-looking, markets are defined prospectively. Their definitions take account of expected or foreseeable technological or economic developments over a reasonable horizon linked to the timing of the next market review*' and that '*markets should be examined in a way that is independent of the network and infrastructure being used to provide services*'.

<sup>20</sup> VoIP offered an alternative to conventional telephony, with calls carried over the Internet as data packets, at generally lower rates.

<sup>21</sup> The licence awarded to Cellcom was subject to a legal dispute. Eventually, Cellcom Ltd. renounced to its licence in 2009.

<sup>22</sup> The MCA provisioned for the availability of carrier selection and carrier pre-selection in Malta, in a decision published in December 2004. Carrier selection enables telephone subscribers to select an operator on a *per call* basis, attained by dialling a pre-assigned four-digit prefix before dialling a standard telephone number.

Carrier pre-selection allows telephone subscribers the choice of having their calls carried by a chosen operator by default, this time not requiring any prefix dialling.

<sup>23</sup> In 2005, the MCA assigned rights of use of UMTS spectrum to GO Mobile and Vodafone (Malta). The rights of use of UMTS spectrum to 3G Telecommunications Ltd were subsequently assigned to Melita Mobile Ltd [later Melita plc].

Another important investment related to international connectivity as Vodafone deployed a second cable to Sicily for the provision of international connectivity services.

The year 2007 saw the entry of Vodafone into the fixed line sector, as this operator launched its fixed telephony services over Worldwide interoperability for Microwave access (hereafter, also referred to as 'WiMAX'). In the last quarter of 2007, Vodafone rolled out Broadband Wireless Access (hereafter, also referred to as 'BWA') services.

Solutions and Infrastructure services (hereafter, referred to as 'SIS') Ltd. also launched digital IP telephony and data services under the brand name of SISCO in Tigne' Point and Manoel Island.

The year 2008 saw the deployment by GO of a second cable to Sicily thus increasing the number of international links (including the microwave link) to three.

A year later further investment materialised as two more submarine fibre-optic cables were deployed by GO and Melita. 2009 also saw the advent of the third mobile network operator, Melita Mobile. The investment in submarine cables brought the total number of operators offering international bandwidth services to four.

### **Description of current fixed access network topologies**

The provision of wholesale transit may use different supporting technologies and infrastructure. For the purposes of the current review, the MCA is hereby providing a more detailed description of currently active local fixed access networks so as to be able to determine, at a later stage, whether there are any differences in the type of use, quality of services and locations served by the identified networks. The different fixed access networks characterising the Maltese landscape are listed below:

- ✚ **GO** currently operates an IP fixed telephony network based on an NGN setup. Since NGNs rely on packet-based rather than circuit-switched solutions, NGNs are more streamlined in the way they convey calls. GO is able to cover the national territory with four fully-meshed media gateways and is interconnected with all other local network operators.

GO is a quad-play operator offering fixed and mobile telephony, fixed and mobile broadband, digital Pay TV services over a DTTV network. GO offers mobile telephony services via its subsidiary Mobisle Communications Ltd.

GO currently owns two international gateways and a microwave link, connecting Malta with mainland Europe via submarine optic fibre cables.

- ✚ **Melita** currently operates a hybrid fibre-coaxial ("HFC") cable network, deployed in an NGN setup and with a nationwide and ubiquitous coverage of Malta. In 2001, Melita started offering high speed Internet access across its HFC network via cable modem, and as from July 2005 it also introduced a packet/IP-based voice service. The company offers analogue and digital cable Pay TV services. Last year Melita also launched its mobile voice and data services.

As with GO, Melita is a quad-play operator interconnected with all other local network operators, except SIS Ltd.

Melita also owns a submarine fibre optic cable, which was deployed in 2009

- ✚ **Vodafone** currently offers mobile and broadband Internet services. Fixed line telephony services are offered over Vodafone's WiMAX network using the fixed broadband standard or D-standard. These services are however only offered as an add-on to one of the retail broadband packages launched by the company.

---

which later merged with Melita to form Melita Mobile, was subject to a legal dispute concluded in 2006.

Vodafone’s WIMAX network is also based on an NGN setup and has a nationwide coverage.

Vodafone is a triple-play operator interconnected with all other local network operators, except SIS Ltd. A third submarine fibre optic cable is owned by Vodafone.

- ✚ **SKY Telecom Ltd** (hereafter ‘SKY Telecom’) currently offers IP telephony and broadband Internet services over its own separate broadband wireless access (“BWA”) network called SKYNet. SKYNet is a completely independent Broadband Wireless Access network, deployed in 2008 using a proprietary Motorola standard – PTP600. This standard provides an air interface which is totally independent of WiMAX BWA and operates in the 5.4Ghz ‘unlicensed’ band.

The coverage of SKYNet currently accounts for approximately 65 percent of the population using 6 x 360° Access Points and 1x60°x6 Access Point arranged in a star configuration for resiliency. Telephony services provided over SKY’s air interface comply with all PATS obligations in terms of interconnection, 112, location and CLI, and portability amongst others.

SKYNet is a two-play operator currently offering voice and broadband services, launched in 2009.

- ✚ **SIS Ltd** (hereafter ‘SIS’) currently offers IP-based telephony and Internet services via its Network Operating Centre at Tigne` Point, Malta.

This operator provides self-supplied wholesale call origination for the purposes of providing retail call services to its clients within a private area. SIS has two interconnection agreements, one with GO and another with Vodafone. SIS’s infrastructure occupies a small geographic footprint and services a very small number of end-users in a private residential area called Tigne’ Point. It has its own network switch, and can therefore terminate calls over its own network. The company is a joint venture between local developer Midi plc and technological partners Siemens S.p.A.

Fixed access network topologies								
Operator	Technology	National coverage	Market Presence		Provision of wholesale transit services		Direct interconnection	
			2006	2011	National	International		
GO plc	copper/fibre	100%	Yes	Yes	Yes	Yes	Yes, to all	
Melita plc	fibre-coaxial	100%	Yes	Yes	Yes	Yes	Yes, to all	
SIS Ltd	copper/fibre	Tigne` area	No	Yes	No	No	Yes, but only to GO	
SKY Telecom Ltd - SKYNet	wireless (Motorola standard - PTP600)	100%	No	Yes	No	No	Yes, to all	
Vodafone (Malta) Ltd	wireless (D-standard)	100%	No	Yes	Yes	Yes	Yes, to all	

Table 1: fixed access network topologies

### Determining what falls within the scope of this market review

This review is intended to determine the relevant market(s) for the provision of wholesale transit services. In the previous sections, a brief description of local market developments and existing network topologies has been provided. The following sections focus on what constitutes the local wholesale transit market(s) on the basis of the main findings highlighted above. The following sections will determine:

1. what comprises the transit element of an end-to-end call path in Malta;
2. whether wholesale transit services provided over different fixed access platforms are substitutable;

3. whether there is a potential for wholesale transit services to be provided by local mobile network operators (hereafter 'MNOs');
4. whether the self-supply of wholesale transit services is to be included within the scope of this market review;
5. whether this review is to distinguish between transit services on the basis of call origination / termination and geographic location;
6. whether a distinction based on whether a call is conveyed to a national or international number is applicable; and
7. whether the provision of wholesale leased lines services and/or direct interconnection is substitutable to the provision of wholesale transit services.

In each case, the MCA shall take into account the possibilities for demand-side and supply-side substitution, so as to identify what falls within the scope of this market review, and thereby determine the boundaries of the identified market(s).

### ***The transit element of an end-to-end call path in Malta***

The EU Recommendation states that wholesale transit services encompass '*the conveyance of traffic both between switches on a given network and between switches on different networks, and including pure conveyance across a third network*'.

It is however recalled, prior to further considerations, that local technological and market developments, as well as the conclusions of the market reviews for wholesale call origination and call termination, shall have an impact on the market definition for wholesale transit in Malta. The Recommendation itself states that, as long as '*the appropriate elements constituting call origination, call termination and transit services are additive, the sum of the three making the whole*', national regulatory authorities (hereafter, referred to as 'NRAs') enjoy 'a degree of discretion' in characterising the wholesale transit market.

A key technological development at the wholesale level relates to the migration of local core access networks to the NGN set up. It is noted that the all local CPs owning a fixed access network have upgraded their core networks into NGNs, thereby marking an overall shift to a network using IP infrastructure.

The shift towards an NGN set up together with direct interconnection allows for a more complete and consistent use of IP by the different CPs.

Furthermore, the structure of network architectures has also changed, especially with respect to the location and function of points of interconnection. In this regard, the local-tandem layer split for routing voice calls no longer exists. Voice call traffic is routed directly via media gateways of the same CP or different CPs. Given that all CPs are directly interconnected, an originating or terminating CP, or a CP supplying third party transit services does not have to convey/route traffic between different tandem exchanges in an NGN environment. Instead, traffic is conveyed and routed directly via different media gateways. No inter-tandem conveyance and inter-tandem transit is therefore observed in an NGN environment.

The technological developments outlined above and the market definitions for wholesale call origination and call termination services are considered again further below.

It is recalled that the EU Recommendation makes reference to transit services as comprising '*conveyance both between switches on a given network and between switches on different networks, and including pure conveyance across a third network*'.

When a call is originated and terminated on the same network (i.e. when a call is conveyed between two media gateways of the same CP) this comprises local-tandem conveyance (hereafter, “LTC”) on a single network. If, however, a call is originated on one network and then terminated on another (i.e. when a call is conveyed ‘directly’ between a media gateway of the CP originating the said call and the media gateway of another CP terminating it), this is referred to as local-tandem conveyance with traffic hand-off between CPs. Another scenario refers to pure conveyance, which comprises the hand-off of a call originated on a particular CP and terminated on another CP through a third party network operator (or transit provider).

The current review concludes that, given the prevailing NGN environment in Malta and the likely developments within the timeframe of this review, due consideration is to be given to the routing path of a call transited between service providers, taking into account the possibility of direct and indirect constraints in the pricing of the wholesale transit product imposed on the said providers. This review takes into account:

- ✦ **pure transit**, which refers to the conveyance of a call between the ‘originating’ media gateway of one CP (say Operator A) through a third party media gateway (say of Operator B) to the ‘terminating’ media gateway of a different CP (say Operator C), or vice versa; and
- ✦ **self-supplied transit**, which refers to the conveyance of a call between the ‘originating’ media gateway of the a CP (say transit Operator A) and the ‘terminating’ media gateway of one of its subsidiaries, or vice versa, and the conveyance of a call between the ‘originating’ media gateway of one of the subsidiaries of Operator A and the ‘terminating’ media gateway of another CP (say Operator B).

No inter-tandem transit is deemed relevant for the purposes of this market review as the prevailing network architectures allow for calls to be conveyed directly between media gateways (i.e. no conveyance between the local exchange and tandem exchange occurs).

### ***The substitutability of wholesale transit services provided over different fixed access network platforms***

The services supported by copper/fibre, fibre-coaxial and wireless network architectures can only be considered substitutes for wholesale transit if, among other factors, national coverage is similar, the quality parameters of the services offered are comparable, and if the requirements of wholesale transit customers, irrelevant of their number and intended use, can be supported on a sufficient scale over the different networks.

This review identifies GO, Melita and Vodafone as operators which have all the necessary network elements in place to provide wholesale transit services throughout the entire territory, via their extensively interconnected network. In this regard, the three service providers have already entered into commercial agreements for the provision of third party transit services with a number of undertakings, including SIS and SKY Telecom. SIS is purchasing wholesale transit services from GO, whilst SKY Telecom is purchasing such services from different suppliers, but mainly from GO and Vodafone.

Given also that these operators also have sufficient spare capacity to meet new or additional requests for transit and given that customers of transit services have the ability to conclude wholesale commercial agreements with different service providers, it is very unlikely that any local CP will be able to implement a Small but Significant Non-Transitory Price Increase (hereafter, referred to as ‘SSNIP’) profitably.

It is the MCA’s view that wholesale transit customers are in a sufficiently strong position to avoid a SSNIP by switching between real commercial alternatives within a reasonable timeframe and at no additional significant costs, especially as GO, Melita and Vodafone



have their network sufficiently rolled out and with sufficient coverage to provide functionally similar wholesale transit services.

The MCA therefore concludes that wholesale transit services provided over the different technological platforms in Malta are substitutable with each other.

### ***The potential for wholesale transit services to be provided by local MNOs***

This review also examines whether local MNOs can potentially offer wholesale transit services which can act as a direct substitute to the transit services offered by local FNOs.

Technically, calls can be conveyed on any transit provider's network once all the relevant network elements, such as local and international media gateway and interconnection agreements with national and international networks, are available.

From a demand-side point of view, if a hypothetical monopolist fixed network transit supplier implements a SSNIP, transit customers can potentially switch from obtaining wholesale transit service over the monopolist's network to an MNO offering such services if the latter service is deemed to be functionally similar and carries a similar cost to the one offered by the monopolist.

Therefore demand-side substitution in the provision of transit services between fixed network operators and mobile network operators can potentially occur where MNOs are directly interconnected with all other fixed and mobile operators, have nationwide coverage, provide a functionally similar service, and the cost of such a transit service is equivalent or cheaper to that of a fixed transit provider.

In respect of network coverage, all MNOs in Malta have national coverage and are therefore considered to be in a position to provide an ubiquitous transit service. In terms of interconnection, local MNOs are also well positioned to offer an ubiquitous transit service. The main difference between the transit services offered over the fixed and mobile network on a local level would concern the functionality and price of the service on offer. Given that mobile operators are using packet based technology at the core, they can offer a similar service to that of the fixed operator. However, whether such a solution is adequate to the transit customer depends on the setup of the transit customer and where this customer decides to interconnect.

In terms of pricing it is generally acknowledged that there is a difference in cost between fixed and mobile services. Therefore the extent of price equivalence between fixed and mobile transit services depends on the pricing structure adopted by each individual MNO. Therefore, whilst on a technical level local MNOs are well positioned to provide transit services, the level of substitutability with fixed transit services depends on whether the transit customer considers a mobile transit service to be functionally equivalent to a fixed transit service and on whether the transit price set by the MNO is comparable to that set by FNOs.

From a supply-side perspective, it may also appear that, in the event of a SSNIP, there is the potential for MNOs to offer a wholesale transit service since the network elements to provide transit services are already available. Nevertheless, it is noted that each of the local MNOs is a subsidiary or forms part of a group of companies which also owns a fixed network. Therefore in the event that a hypothetical monopolist of fixed transit services applies a SSNIP on the provision of fixed transit services, it would be illogical for the same company to start offering mobile transit services through its own mobile arm in response to the SSNIP. Given that all fixed transit operators own a mobile arm, this reasoning would apply to all of these operators. Furthermore, as already stated above, given that all fixed operators already offer voluntary fixed transit services, a hypothetical

SSNIP can be more easily constrained through the provision of fixed transit services rather than through the provision of a new transit service over the mobile network.

This would suggest that, in reality, local MNOs do not have much incentive to start supplying a service which is already offered and for which available capacity by far exceeds existing demand.

New market entry in the mobile sector in response to a SSNIP in the provision of fixed transit services is unlikely to materialise given that such entry requires significant investment and time in order to materialise. Therefore new market entry in the mobile market cannot be considered to pose an immediate competitive constraint on a hypothetical fixed network monopolist implementing a SSNIP in the provision of wholesale transit services at a fixed public location.

The MCA therefore concludes that, whilst it is technically possible for an MNO in Malta to start offering a wholesale transit service, such an entry depends on ability of the individual MNO to replicate the same functionality and price of the transit services offered over the fixed network. From a supply side perspective the MCA concludes that there is very limited scope in the provision of such services, especially given that this demand is already well served via the fixed networks.

### *The relevance of self-supplied transit services*

The issue of self-supply is also of particular relevance to the current market definition exercise. This section considers whether self-provided transit services fall within the scope of this market review.

It is recalled that all local fixed CPs, except SIS which is only interconnected with GO, are directly interconnected with each other. The largest three of these are currently self-supplying wholesale transit services to their own retail arm, including their mobile business segment. At this stage it is worth noting again that each local transit provider owns a mobile network. Mobisile Communications Ltd is a subsidiary of GO, Melita owns Melita Mobile whilst Vodafone also provides its own mobile services<sup>24</sup>.

The MCA also notes that, for all operators competing in the provision of wholesale transit services, self-supplied transit traffic by far exceeds third party transit traffic (i.e. wholesale traffic generated by transit services offered in the merchant market or simply pure transit).

When assessing the figures<sup>25</sup> for national transit traffic, the MCA finds that the share of third party national transit traffic (i.e. pure transit) as at Q1 2011 stood at just 3.67 percent of the total national transit minutes. The remaining share of 96.33 percent was accounted for by self-supplied transit traffic. In absolute terms, third party national transit traffic totalled 1.49 million minutes in Q1 2011, whilst self-supplied national transit traffic amounted to 39.26 million minutes during the same period.

When assessing international transit traffic, the MCA finds that the market share of pure transit stood at 38.21 percent in Q1 2011. Correspondingly, the share accounted for by self-supplied transit traffic was the remaining 61.79 percent. In absolute terms, third party international transit traffic stood at 13.78 million minutes in Q1 2011, whilst self-supplied international transit traffic amounted to 22.70 million minutes in Q1 2011.

---

<sup>24</sup> When referring to self-supply transit traffic, this review takes into consideration traffic for those operators which supply their own retail arm with wholesale transit services over their own network inputs.

<sup>25</sup> The cut-off date for all data provided in this document is the 31<sup>st</sup> of June 2011.

Given that local transit suppliers use the same network elements when supplying transit services to their retail arm(s) and to third party network operators, the MCA concludes that local transit suppliers should find no difficulty to handle additional wholesale transit traffic on their networks, irrespective of whether such traffic is self-supplied or third-party.

Existing transit providers have sufficient spare capacity available as to meet any additional demand for wholesale transit services that may arise within the timeframe of this review. Capacity can be made available on a sufficient scale and in a relatively short period of time.

From a demand side perspective, the implementation of a SSNIP would be unprofitable as existing or potential customers of transit services (even the retail arms of existing transit providers) can switch between alternative operators without incurring significant costs and in a relatively short period of time. In the event of a SSNIP, existing wholesale customers of transit services may also consider gradually reducing their use of third party transit services by deploying their own infrastructure and eventually broadening their network footprint via direct interconnection.

In view of the above, the MCA therefore concludes that self-supplied transit services fall within the scope of this market review.

### *Distinguishing between types of transit services*

This review considers the possibility of distinguishing between types of wholesale transit services. The MCA assesses whether such a distinction can be drawn on the basis of:

- ✚ the type of operator originating the call (or point of origination);
- ✚ the type of operator terminating the call (or point of termination); and/or
- ✚ the geographic location of the operator originating/terminating the call.

Before outlining its arguments, the MCA recalls three main proposals outlined in this document. First, for the purposes of this market review the transit element of an end-to-end call path is denoted as the call conveyance between two media gateways of different CPs, interconnected via a third party service provider i.e. the supplier of wholesale transit services. Second, it is noted that any transit supplier could transit traffic between two of its own retail arms. Given that the provision of self-supplied transit services employs the same network elements involved in the provision of wholesale transit services in the merchant market(s), it is deemed relevant for the purposes of this market review. Third, wholesale transit services provided over different fixed access networks in Malta are substitutable.

The MCA therefore underlines that wholesale transit services cannot be characterised on the basis of the originating operator. Irrespective of whether the call is originated from a fixed or mobile operator and irrespective of whether the CP originating the call is the retail arm of the transit provider, the same network inputs are utilised in the provision of a wholesale transit service. Given that wholesale transit services provided over different fixed access networks are substitutable the choice of supplier would not change the relevance of the point of call origination for defining wholesale transit markets. Even in those instances when a transit service is required for a call originated via a CPS operator, the service offered by the transit provider is the same irrespective of whether or not this operator is hosting the CPS operator.

It also underlines that the definition of wholesale transit services cannot be characterised by the type of network hosting the called number i.e. by whether a mobile or fixed

operator is terminating the call as long as the call is terminated as intended by the caller. From a demand-side point of view, it would appear that wholesale customers of a transit service routing a call to a mobile number would not consider a transit service routing the said call to a fixed number as an effective substitute. It is understood that each number serves the purposes of the customer holding it and the third party trying to reach that number. Therefore a call requiring termination on a particular number cannot be terminated elsewhere.

This explains why local transit providers offer their customers the facility to convey calls to all number types, i.e. both mobile and fixed numbers. It is also recalled that the said providers have sufficient spare capacity to handle additional wholesale traffic on their network relatively quickly and without incurring any additional costs. Therefore it is very unlikely that, in the event of a SSNIP, any transit provider would switch its supply from transit to a fixed number to transit to a mobile number and vice versa. This would therefore suggest that there is no distinction between a transit service for the conveyance of a call to a mobile number and a transit service for the conveyance of a call to a fixed number.

Nevertheless, the MCA concludes that the type of wholesale transit service sought by a CP may depend on the geographic destination of the call to be conveyed. More specifically, a customer may either require a transit service to terminate a call within the boundaries of the national territory (considered as one whole geographic location given Malta's small size) or else may require a transit service to terminate a call beyond these boundaries i.e. on a network located outside the national territory. In the latter case, additional fixed network elements would be required for the call to be transited and terminated successfully. The relevance of distinguishing between types of wholesale transit services on the basis of geographic location is assessed in the following section.

### ***Distinguish between transit services to national numbers and transit services to international numbers***

For the sake of clarity, this section refers to wholesale transit services to national numbers as national transit services and to wholesale transit services to international numbers as international transit services. It also assess whether it is possible to distinguish between national and international transit services to the extent of defining separate markets for each service type.

A brief outline of the particularities of an island state when it comes to interconnection with mainland Europe is also provided.

A wholesale international transit service involves the routing of voice and data traffic to and from media gateways beyond the national territory. However, Malta's insularity and geographic location poses significant challenges in this regard, as the routing of such traffic can only be guaranteed through the provision of submarine (or undersea) international connectivity to global telecoms networks in mainland Europe and the Mediterranean region.

Direct international communication with global telecommunications networks is currently dependent on four submarine links, all of which are fibre optic.

The first link to mainland Europe was commissioned in 1976, in the form of a microwave link to Pozzallo in Sicily. Further investment in the field materialized in 1995, when GO commissioned an undersea (or submarine) fibre optic cable (also referred to as GO-1) linking Malta (St. George's Bay) to Sicily (Catania). Then in 2004, Vodafone deployed its own undersea cable, linking Malta (St. George's Bay) to Sicily (Pozzallo) over a distance

of 250km. A fourth undersea cable to Sicily (Pozzallo) was commissioned by Melita in 2008. This cable was laid down between St. Paul's Bay, the Maltese landing site, and Pozzallo in Sicily, covering a distance of around 100km. The respective cable laying works were concluded in May 2009. GO also deployed its second undersea cable (also referred as GO-2), which was laid down between St. Paul's Bay to Mazara Del Vallo in Sicily. Cable laying works were completed in 2009, covering a distance of 290kms.

Figure 2



The said investment assumes major significance for an island state, as each undersea fibre optic cable serves as an international gateway to local telecommunications service providers, which are geographically isolated from mainland Europe and North Africa.

Local operators are confident that, in terms of resilience and capacity, the current undersea cable network (or international connectivity network) is sufficiently robust to cater for actual and projected demand for broadband services and a portfolio of other services including the routing of international voice and data traffic. In this regard, the current submarine cable network allows local operators to reach all the major European and Mediterranean IP exchanges via major IP service providers.

With the current set-up, all locally originated international voice traffic is routed via media gateways, including those located at the local landing sites, and then via one of the submarine links to foreign networks. Similarly, all the traffic which is originated abroad for conveyance to a local network is routed via one of the submarine cable links before reaching the media gateway at the local landing site.

A wholesale customer would only succeed in conveying an international call by purchasing transit from a third party network operator capable of routing that call via an international gateway. Otherwise the call would not terminate on the foreign network to which the called number is assigned.

Wholesale consumer preferences for transit are therefore characterized by the destination of the call to be conveyed (depending on the geographic location of the network to which the called number is assigned), thereby suggesting that wholesale consumers would not consider a national transit service as an effective substitute to an international transit service.

The above reasoning would therefore suggest that, from a demand-side perspective, it is unlikely for international transit services to effectively substitute national transit services and vice-versa.

From a supply-side perspective, GO, Melita and Vodafone have over the years invested significantly in Malta's interconnectivity network. It is recalled that each of the above-mentioned operators owns a nationwide network architecture of media gateways, which is complemented by international media gateways at the local landing sites.

It is also recalled that, in order to terminate an international call at the specific location identified by the called number, the said call has to first be conveyed via a local media gateway and then via an international media gateway to those infrastructures owned by different international operators. In this sense, the supply of international transit services is deemed to require a much higher level of investment by the service provider than the supply of national transit services. It therefore follows that, given the different costs associated with the supply of national and international transit services, the applicable cost of conveyance of an international call would differ from that applicable to the conveyance of a national call.

The cost of an international call would include an attribution of all the expenses associated with the conveyance of the call through a Maltese international gateway, costs which are not applicable and charged for in the case of a national call. On the other hand, the cost associated with national transit only includes the conveyance of the call via a local media gateway.

The MCA therefore holds the view that, given the functional attributes of national and international transit services and the differing costs involved in the provision of the two services, a CP seeking to convey an international call would not be able to do so by acquiring a national transit service as a substitute. Furthermore, an existing or potential supplier of national transit services not owning international connectivity facilities is unlikely to be in a position to start competing in the provision of a wholesale international transit service sufficiently quickly such as to constrain a SSNIP for this service.

Irrespective of whether or not a CP is already supplying national transit services, the implementation of an international connectivity project is generally intended for realization over a number of years, given that such a project would entail the setting up of an international media gateway, the laying of a submarine cable and the necessary arrangements for international connectivity from the landing point of the submarine cable. The respective CP would then need to negotiate agreements with foreign operators to terminate its international transited calls.

This would suggest that, in the event of a SSNIP, a supplier of national transit services would not be able to switch sufficiently quickly and without incurring significant costs to supplying international transit services.

On the other hand, it can be argued that a supplier of international transit services could be in a better position to enter the national transit market following a SSNIP, assuming that such a provider is already interconnected with other local CPs. The scenario would be totally different in the case of new or potential market entrants. A CP considering to supply national transit services would first need to overcome significant time and financial constraints in deploying a nationwide network infrastructure and in negotiating the necessary interconnects with other local CPs. Indeed, such an investment would entail a huge financial burden and is not likely to be doable within the timeframe of this review. In the case of Malta, where demand for national transit services is limited, an investment by an undertaking to provide such services would likely be unsustainable.

In any event, the MCA notes that despite the low demand for national transit services, three local CPs already provide such services to third party CPs. Furthermore, they also have sufficient spare capacity to handle additional international transit traffic. This means

that, in the event of a SSNIP, no switching in the supply of national and international transit services would be observed locally. The SSNIP would be short lived as all operators are in direct competition with each other.

The MCA therefore concludes that, given the particularities of an island state and the prevailing market conditions, the provision of national transit services and the provision of international transit services fall into separate markets. This review shall carry out a Three Criteria Test at a later stage to determine whether any of the identified markets shall be subject to *ex ante* regulatory intervention.

### ***The substitutability of wholesale leased line services and direct interconnection with wholesale transit services***

This section determines whether the provision of wholesale leased line services and direct interconnection can be deemed as being sufficiently substitutable with the provision of wholesale transit services as to be considered in the same relevant markets.

A wholesale leased line service encompasses a link providing dedicated capacity for two-way conveyance between two fixed points (i.e. a dedicated point-to-point link) provided by a network operator.

The setting up of a direct physical interconnection also allows for a direct dedicated link between network operators. This could be achieved by the deployment of a fixed link between one or more operators, such as MNOs and other FNOs<sup>26</sup>.

At the lowest level, both services can be said to share similar functional attributes to wholesale transit as both can be supplied to enable call conveyance on the public fixed telephone network. However, from a demand-side perspective, it is very unlikely for the any of the two services to be considered close substitutes to wholesale transit. For example, leased lines users enjoy dedicated capacity and other service parameters which cannot be guaranteed via a wholesale transit service.

Furthermore, a switched/routed service is generally priced differently than a dedicated point-to-point service. The former is priced on the extent of use, whilst the latter is priced on the basis of parameters which go well beyond those characterising the conveyance of local and international voice calls. This would suggest that the price of a service offering dedicated point-to-point capacity would be set significantly above the price of a wholesale transit service. It therefore follows that, in the event of a SSNIP, customers of wholesale transit services would not switch in sufficient numbers as to directly constrain the behaviour of a hypothetical monopolist. Similarly, purchasers of a service offering dedicated capacity would not be able to switch to wholesale transit in order to avoid a SSNIP, given that the former wholesale service offers additional functionalities to those made available via the latter type.

Overall, it is highly unlikely for wholesale customers to switch between dedicated capacity services and transit services sufficiently quickly and in sufficient numbers as to constrain a SSNIP implemented by a hypothetical monopolist.

From a supply-side perspective, any undertaking considering to offer dedicated point-to-point capacity must commit significant investment and time in ensuring that the necessary network elements are effectively in place. In addition, the operator carrying out such an investment needs to ensure that a minimum volume of traffic is generated so as to justify the deployment of any form of direct physical connection. However, given

---

<sup>26</sup> For example, a service provider deploying fibre-optic technology so as to provide dedicated capacity between two fixed points.

the prevailing local market conditions, there is a risk for any interested undertaking to fall short of reaching the necessary critical scale in terms of customers and the volumes of traffic. This risk, compounded with sufficiently high costs of switching between one wholesale service and the other, would limit the possibilities for supply-side substitution.

Furthermore, all existing providers of services offering dedicated point-to-point capacity (including GO, Melita, and Vodafone) already supply wholesale transit services. The two services are marketed on different terms and conditions by these operators on the knowledge that market preferences vary according to the technical requirements of consumers. None of these suppliers would therefore be in a position to constrain a SSNIP implemented by a hypothetical monopolist given that, in most instances, consumers requiring a dedicated capacity solution do not consider a transit solution as a viable alternative (and vice versa).

The MCA also considers that newer market entrants in the provision of wholesale transit services are not expected to start providing services offering dedicated capacity sufficiently quickly and at a sufficiently low cost as to constrain a SSNIP by a hypothetical monopolist. The time horizon of the investment, the extent of sunk costs, and the expected margins in view of current and foreseeable demand are likely to discourage plans for the provision of such services, especially within the timeframe of this review.

In view of the above, the MCA finds no effective demand-side and supply-side substitution between a wholesale transit service and a wholesale service offering dedicated capacity. It therefore concludes that the provision of leased lines services and direct interconnection fall in separate markets to those identified for the provision of wholesale transit services.

### **Relevant geographic market(s)**

According to EU Commission guidelines, a relevant geographic market '*comprises an area in which the undertakings concerned are involved in the supply and demand of the relevant products and services in which area the conditions of competition are similar or sufficiently homogeneous and which can be distinguished from neighbouring areas in which the prevailing conditions of competition are appreciably different*'. The Commission's SMP Guidelines also refer to the use of two criteria in determining the geographical scope of a relevant market, namely the area covered by a network, and the existence of legal and other regulatory instruments.

The relevant geographic market for the provision of wholesale national transit services is subject to a national pricing constraint, as all authorised or licensed suppliers offer services and determine prices at the national level without differentiating by reference to geographic location.

Similarly, the relevant geographic market for the provision of wholesale international transit services is also subject to a national pricing constraint.

The MCA therefore concludes that both markets are national in scope.

### **Response to consultation on market definition**

All respondents to national consultation agreed with the MCA's definition of the wholesale transit markets in Malta.



### **Conclusion on the market definition exercise**

In view of the reasoning outlined in the previous sections, the MCA defines two wholesale transit markets in Malta as follows:

- ✦ *the market for the provision of 'wholesale national transit services in the fixed public telephone network in Malta'; and*
- ✦ *the market for the provision of 'wholesale international transit services in the fixed public telephone network in Malta'.*

### 3. Market analysis

The wholesale market for the provision of transit services in the public telephone network has been removed from the list of markets susceptible to *ex ante* regulation in the Recommendation. However, according to the same Recommendation, it is possible for NRAs to regulate non-listed markets where this is justified by national circumstances. The 'three criteria test' provides a standard benchmark on which to determine whether an identified market should be subject to *ex ante* regulation.

An identified market would be subject to *ex ante* regulation only if the three criteria imposed by the respective test are met cumulatively. If, however, the market assessment fails any of the three criteria, no *ex ante* regulation would be warranted. If the said market is already subject to *ex ante* regulation, existing regulation would then have to be withdrawn.

Regulatory intervention of the local wholesale transit markets would only be possible if:

- A. the identified markets are subject to the presence of high and non-transitory barriers to entry, being either of a structural, legal, or regulatory nature;
- B. the identified markets have those characteristics, such as barriers to entry, which do not allow for effective competition without regulatory intervention within the timeframe of this review; and that
- C. competition law by itself is inadequate to address any potential market/s failure in the absence of *ex ante* regulation.

A number of indicators are considered in the forthcoming assessment, taking into account a prospective two-year timeframe, as recommended by the EU Commission<sup>27</sup>.

#### **Assessment of the first criterion**

The Recommendation states that '*structural barriers to entry result from original cost or demand conditions that create asymmetric conditions between incumbents and new entrants impeding or preventing market entry of the latter*'. As already indicated above, the EU Commission qualifies barriers to entry as being either of a structural and/or regulatory/legal nature.

In its assessment of the first criterion the MCA considers the following:

- Existence of economies of scale and economies of scope;
- Barriers to switching for consumers;
- Existence of sunk costs;
- Control of infrastructure not easily duplicated; and
- Vertical integration.

The MCA takes into account in its analysis the regulation which applies in other wholesale markets that are closely related to the relevant wholesale fixed transit markets, such as obligations mandated on wholesale fixed line call termination.

---

<sup>27</sup> According to the revised EU Commission Recommendation: '*the main indicators to be considered when assessing the first and second criteria are similar to those examined as part of a forward-looking analysis*'.

The MCA also notes that, at this stage, it is not aware of any significant barriers to entry in the identified wholesale transit markets that are of a legal or regulatory nature. General administrative authorisations and other general regulation are not believed to pose high barriers to entry in these markets.

The indicators selected to assess the prevailing and prospective conditions for market entry are described in the sections below.

#### A. Economies of scale and scope and network replicability

The fixed costs associated with providing wholesale services at a fixed public location are subject to significant economies of scale and scope. In view of the markets considered in this review, large-scale operators such as GO, Melita, and to a lower degree Vodafone may be deemed to enjoy significant cost advantages and efficiencies over smaller alternative operators (OAOs), such as SKY Telecom, SIS, and new market entrants, due to their long standing presence in the provision of an array of fixed services and also other communications services.

It appears that GO, Melita, and Vodafone may be in a better position to compete effectively in the identified markets given the greater economies of scope that may be exploited by these operators. Their ability to supply a range of wholesale services simultaneously implies lower average costs of production as costs are shared over a range of services<sup>28</sup>. Further to this, large network operators and incumbents will tend to enjoy significant cost advantages with their larger-scale production as the marginal cost of producing an extra unit of output would be much smaller than that incurred by a newer market entrant.

In these circumstances, large network and incumbent operators may consider taking advantage of their favourable position, in that they enjoy significant efficiencies from their presence in both upstream and downstream markets and could therefore afford to implement a price reduction for transit services. The prospect of lower revenue streams and tighter margins could serve as a deterrent to market entry in the provision of wholesale transit services, as potential entrants would not be in a position to sustain prices that do not even cover sunk costs.

#### National transit services

Given the small customer base for wholesale national transit services and the corresponding low level of demand, some reservations may therefore arise regarding the viability of new entry in this market. The MCA has already observed that the infrastructure owned by GO, Melita and Vodafone, all vertically-integrated operators, is not easily replicable within the forward looking period considered in this market review.

However, with the emergence of new wireless technologies, the MCA also notes that it still appears possible for an undertaking to consider building a network in Malta which, although not exactly replicable, may still provide a comprehensive substitute to transit services offered by existing suppliers. This has been the case of SKY Telecom with the deployment of its SKYNet wireless network.

In this sense, smaller operators and new market entrants may still have an incentive to invest in the deployment of their own network infrastructure to provide multiple wholesale and retail fixed and data services, including wholesale transit services. For example, SKY Telecom opted to deploy SKYNet over the last two years and started offering an array of wholesale and retail fixed and data services. Eventually, SKY Telecom

---

<sup>28</sup> Cost savings are indeed possible where common processes are used in the provision of a group of products/services.

managed to gradually reduce its reliance on third party network operators supplying it with wholesale national transit services by interconnecting directly with other CPs.

The MCA therefore concludes that, whilst it can be argued that it is difficult for an existing small CP and a new entrant to offer wholesale transit services within the two-year timeframe of this review, further build-out for the provision of additional transit services by existing suppliers and smaller CPs is possible, given that there is the demand for such services.

### International transit services

In relation to the provision of wholesale international transit services, this review underlines that Malta is connected with mainland Europe via a number of submarine fibre optic cables owned by GO, Melita, and Vodafone. These links are vital for the electronic communications services industry since they represent the main connection point with international providers for international calls, IP bandwidth, international leased lines and other services. Several investments have been undertaken in this area over the last few years. Last year alone, GO and Melita have completed their own submarine cable-laying works, with the international transmission capability doubling in less than three years.

The MCA observes that investment in these submarine links has been made in a relatively short period of time, despite the significant financial outlays and high sunk costs involved and the complexity of laying a submarine cable between Malta and Sicily. The MCA therefore believes that barriers to entry with respect to the provision of wholesale international transit services are substantial but certainly not insurmountable.

Given the increases in demand for international connectivity in general, the business case for the deployment of submarine links has improved considerably, thereby decreasing the risks of undertaking such an investment. Furthermore, given such an increase in demand, a network operator building its own international link will gain from increased cost efficiencies and economies of scale.

In conclusion, the MCA underlines that a wholesale offer for international transit services has already been launched by GO, Melita and Vodafone. With the exception of GO, which is currently regulated, the other CPs are offering their services on a commercial basis. The MCA therefore concludes that, although the international transit providers enjoy economies of scale and scope resulting from the ownership of the submarine links, the fact that these operators are providing international transit services to other CPs on a commercial basis ensures that these economies of scale do not act as a barrier to smaller CPs.

### B. Countervailing buyer power (“CBP”)

A further consideration in the assessment of the first criterion refers to the extent of CBP exercised by wholesale customers on transit providers. The stronger the CBP enjoyed by wholesale customers, the less likely it is for a transit provider to set prices above the competitive level.

Currently, GO, Melita and Vodafone are already supplying wholesale national transit services in Malta. A fourth operator, SKY Telecom, can possibly start supplying such services sufficiently quickly and without incurring significant additional costs following a SSNIP. Given that existent suppliers have sufficient spare capacity to handle greater volumes of national transit traffic, and given the possibility of new market entry, wholesale customers are in a sufficiently strong position to exercise CBP by threatening to switch and thereby constrain the pricing behaviour of a hypothetical monopolist.

The small customer base for wholesale national transit services further enhances the strength of the buyers' side of the local market, and implicitly restricts the potential for suppliers to exert market power. Further to this, it is important to underline that the scope for national transit services in Malta is very limited given that all fixed operators (with the exception of SIS Ltd) are directly interconnected with each other, thus making it possible for any transit customers to switch provider without difficulty and no great cost.

With respect to international transit services, Malta is connected to mainland Europe via four submarine cables, two of which are owned by GO, one by Melita, and another by Vodafone. CPs seeking to purchase international transit services therefore have the incentive and possibility to seek the best offer on the market and to switch provider in response to a hypothetical price increase. Switching between international transit providers can materialize sufficiently quickly and not at a significant cost, as each provider is supplying similar wholesale transit services.

The MCA therefore concludes that customers of wholesale transit services are able to switch from one service provider to another with relative ease and not at a significant cost, thereby suggesting no barriers to switching and the potential for CBP in the identified markets.

#### C. Existence of sunk costs

Sunk costs are upfront costs that an undertaking must incur when investing in new infrastructure as a long-term commitment to provide a good or a service. Given that sunk costs are not recovered on exit, the operator undertaking the investment must at least ensure that the returns to such an investment cover these costs.

There is no question that the deployment of a fixed telephony network involves significant financial outlays, most of which are not recoverable upon exit from the market. Nevertheless, despite these costs, over the last few years Malta has witnessed significant investment by a number of existing and new CPs.

Two CPs, namely SKY Telecom and Vodafone, invested in their own broadband wireless access network, over which they are providing a number of fixed voice and data services. These CPs are also considered capable to start supplying wholesale national transit services.

On the other hand, the incumbent operators, namely GO and Melita, continued to invest in their local network set up to streamline the provision of their upstream and downstream services. Of particular relevance to this market review is the significantly heavy investment in international links undertaken by the said operators.

The MCA therefore concludes that, although high sunk costs are inevitable when deploying fixed network elements, the significant upgrades and investments that have been undertaken recently indicate that sunk costs are not posing significant barriers to entry in the markets for transit services, especially where such investments are backed up by adequate demand.

#### D. Vertical integration

All service providers currently offering transit services are vertically integrated in that they are present in other upstream and downstream markets. It is acknowledged that vertical integration in itself is not detrimental to the market and generally leads to efficiency gains in the provision of services to end-users.

However, there is the risk that vertically integrated operators may engage in anti competitive behaviour to restrict market entry. They may, for example, deploy a strategy

of anti-competitive pricing in one or more downstream markets so as to distort revenue streams of alternative service providers and indirectly foreclose one or more markets.

Based on observed market conditions, the MCA finds no evidence to suggest that competition in the markets under review has suffered or will suffer any material adverse effects during the timeframe of this review as a result of vertical leveraging.

Competition in the wholesale national transit market is deemed sufficiently strong as to preclude any such behaviour by one of the vertically integrated operators supplying national transit services. In this regard, none of these suppliers can act independently of competitors in the provision of wholesale national transit and, to a certain extent, there is still scope for entry and expansion to materialise within the timeframe of this review. Furthermore, the indirect constraint that direct interconnection poses on the provision of wholesale transit services acts as a further deterrent for wholesale transit providers to act in an anti-competitive way.

The MCA also finds no evidence to suggest that competition in the market for wholesale international transit services has been or will be impaired by the presence of vertically integrated operators supplying such services. In this respect, two new suppliers have launched their own wholesale offer without the need of regulatory intervention and are competing directly with the incumbent and amongst themselves. This suggests that none of these providers can behave independently from each other and exploit any market power arising from a preferential position in the market.

The MCA therefore concludes that vertical integration does not represent a significant barrier to entry in the wholesale national and international transit markets.

#### Conclusion on the assessment of the first criterion

The MCA concludes that the two identified wholesale transit markets are not subject to the presence of high and non-transitory barriers to entry, these being either of a structural, legal, or regulatory nature.

In their submission to the consultation, all respondents express broad agreement with the MCA's assessment of the first criterion and the finding of no barriers to entry in the identified markets.

GO and Vodafone however raise two issues in this regard.

GO highlights that the assessment of the first criterion *'tends to put together the respective networks of GO, Melita and Vodafone and appears to treat the operators as if they were somehow unitary in their actions'* when *'in reality the fact that there are three independent operators competing in the same market actually points to a much diminished scope for leverage for any of them'*.

The MCA underlines that in no instance did it ever consider operators as if they were unitary in their actions. The current review justifies the inclusion of GO, Melita and Vodafone in the aforementioned markets on the basis of a demand-side and supply-side substitutability analysis, mainly in terms of functionality and price.

It clearly identifies the different network topologies characterising the Maltese Islands and eventually provides sufficient evidence as to why none of the above mentioned operators is in a position to exercise leverage in the provision of wholesale transit services.

Vodafone's only comment relates to the potential *'risks that new entrants might be disrupting the current market conditions'* and the *'service that is currently being offered by certain providers'*. Vodafone specifies that *'certain service providers might be*

*conveying international traffic towards Malta via their data connectivity' and that if 'certain safeguards are not maintained, the user may experience bad call quality, clipping, delays, echoing, voice distortion and a false or no calling-line identification'.*

The MCA notes that no formal complaints have been received to date regarding the issues related to quality raised by Vodafone and therefore the MCA is not in a position to determine whether such risks exist or not and to which providers Vodafone are referring to. The MCA understands that the main concern highlighted by Vodafone relates to the quality experienced by the end-user when making a fixed call rather than by transit access seekers. Although the focus of this analysis is not retail services, the MCA believes that given the presence of multiple networks providing retail call services and wholesale transit services, both end-users and transit access seekers can obtain their required services from providers which provide a good quality of service.

### **Assessment of the second criterion**

The Recommendation states that *'even when a market is characterised by high barriers to entry, other structural factors in that market may mean that the market tends towards an effectively competitive outcome within the relevant time horizon'.*

In determining the extent of competition in the identified markets the MCA first assesses transit traffic by outlining market shares enjoyed by existing suppliers.

In this regard, it is recalled that all local CPs, with the exception of SIS, are interconnected between themselves. Given the high degree of interconnection, existing suppliers of transit services report large volumes of self-supplied traffic i.e. large volumes of traffic generated by the transit supplier's own retail arm(s). Apart from pure transit services, self-supplied traffic has also been deemed relevant for the purposes of this market review and should therefore be considered in determining the overall size and competitive conditions of the identified markets.

The forthcoming analysis therefore considers both self-supplied and third party transit traffic in the assessment of market shares enjoyed by CPs in the provision of wholesale national and international transit services.

#### **National transit traffic**

When assessing market share developments with respect to national transit services, the following traffic flows are considered:

- ✦ self-supplied transit traffic: includes traffic originating from the retail arm(s) of a transit supplier to other CPs, traffic terminating on the said retail arm(s) from other CPs and traffic between the different retail arms of a transit supplier; and
- ✦ pure transit traffic: traffic originated from local fixed and mobile CPs transited via a third party fixed provider for termination on another CP.

#### **International transit traffic**

When assessing market share developments with respect to international transit services, the following traffic flows are considered:

- ✦ self-supplied transit traffic: traffic originated from the retail arm(s) of a transit supplier for termination on a network located in another country and traffic originated from a local transit provider for termination on a network owned by a CP located in another country; and

- ✦ pure transit traffic: traffic originated by a local CP, which is transited via the submarine link of a third party network operator for termination on the network of a CP located in another country.

## A. Market share analysis

The purpose of this section is to assess market share developments in the national and international transit markets. The assessment is based on transit traffic data provided by GO, Melita and Vodafone (Malta). Data is provided on a quarterly basis for the period Q1 2009 to Q1 2011.

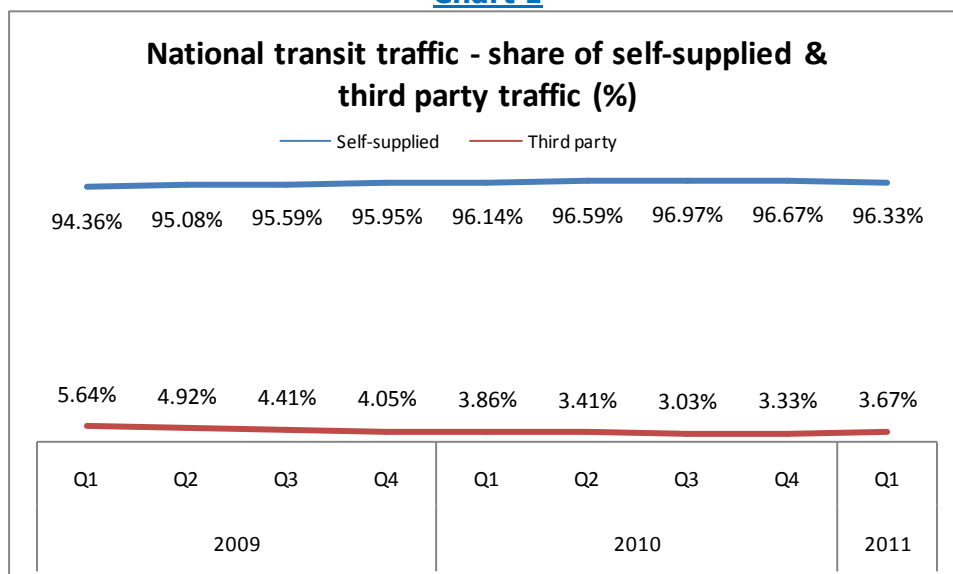
### i. National transit traffic volumes

National transit traffic volumes strengthened over the last two years as a result of stronger self-supplied traffic volumes, which outweighed declines for third party national transit traffic. As shown by Chart 1 below, the share of third party national traffic out of all national transit traffic declined from 5.64 percent as at Q1 2009 to 3.67 percent as at Q1 2011. On the other hand, the share of self-supplied national transit traffic increased from 94.36 percent in Q1 2009 to 96.33 percent in Q1 2011.

The low and declining share of third party national transit traffic is a result of the following:

- ✦ most CPs in Malta are directly interconnected;
- ✦ SKY Telecom is gradually shifting its CPS users to SKYNet and thereby reducing its use of wholesale national transit services offered by GO; and
- ✦ all MNOs are owned by CPs currently supplying wholesale transit services, thereby resulting in stronger volumes for self-supplied national transit traffic.

**Chart 1**



In absolute terms, third party national transit traffic went down from 1.91 million minutes in Q1 2009 to 1.49 million minutes in Q1 2011. GO reported the largest decline in terms national transit traffic volumes, down from 1.90 million minutes in Q1 2009 to 1.03 million minutes in Q1 2011. Consequently, GO's overall market share of third party



national transit traffic shrank to 68.98 percent in Q1 2011 from 99.71 percent in Q1 2009. Vodafone’s decline in absolute terms was only marginal during the same period.

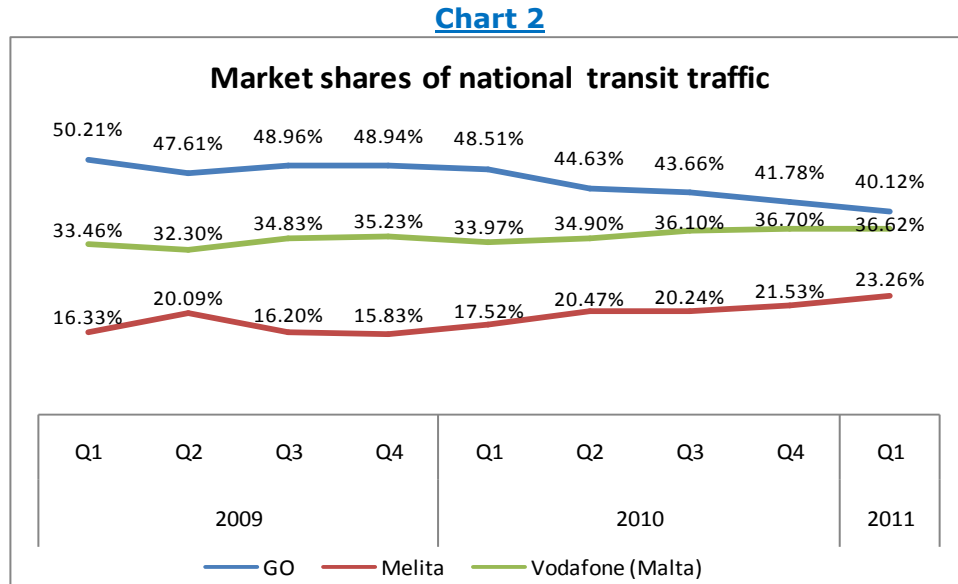
Contrary to developments for GO and Vodafone, Melita reported stronger third party national transit traffic volumes, up from 0.01 million minutes in Q1 2009 to 0.46 million minutes in Q1 2011. However, stronger transit traffic volumes for Melita were not enough to compensate for losses sustained by GO and Vodafone.

In view of the current circumstances and the factors influencing developments for third party national transit traffic, it is not anticipated that third party national transit traffic will increase within the timeframe of this review. On the other hand, it is expected that self-supplied traffic will continue to register gains, especially as usage of mobile telephony increases further.

Turning to the market shares of individual providers of national transit services, Chart 2 shows that Vodafone’s market share out of all national transit traffic increased from 33.5 percent in Q1 2009 to 36.6 percent in Q1 2011. The market share for Melita also increased substantially from 16.3 percent to 23.3 percent.

The gains reported by Melita and Vodafone has been reported at the expense of GO, which saw its market share shrink from 50.2 percent in Q1 2009 to 40.1 percent in Q1 2011.

Chart 2 effectively shows that market shares of the different transit providers are effectively converging at a very fast pace, indicating a more competitive situation in the market.



The tendency amongst the newer market entrants, namely Melita and Vodafone (Malta), to gain market share at the expense of the incumbent operator, GO, provides a clear signal that no market player enjoys SMP in the provision of national transit services.

Whilst the MCA acknowledges that these developments are mainly a result of own retail operations generating large traffic streams, which in itself implies that spare capacity is readily available, it still considers that no operator is in a position to set prices above the

competitive level in the merchant market in the absence of regulation, especially as demand for third party national transit services is falling.

The pricing behaviour of existing suppliers of national transit services is also constrained by the possibility of the few number of wholesale customers exercising their CBP and switching supplier. Switching can materialise sufficiently quickly and at little cost in response to a price increase, given that all suppliers offer a ubiquitous transit service connecting to all fixed and mobile networks in Malta.

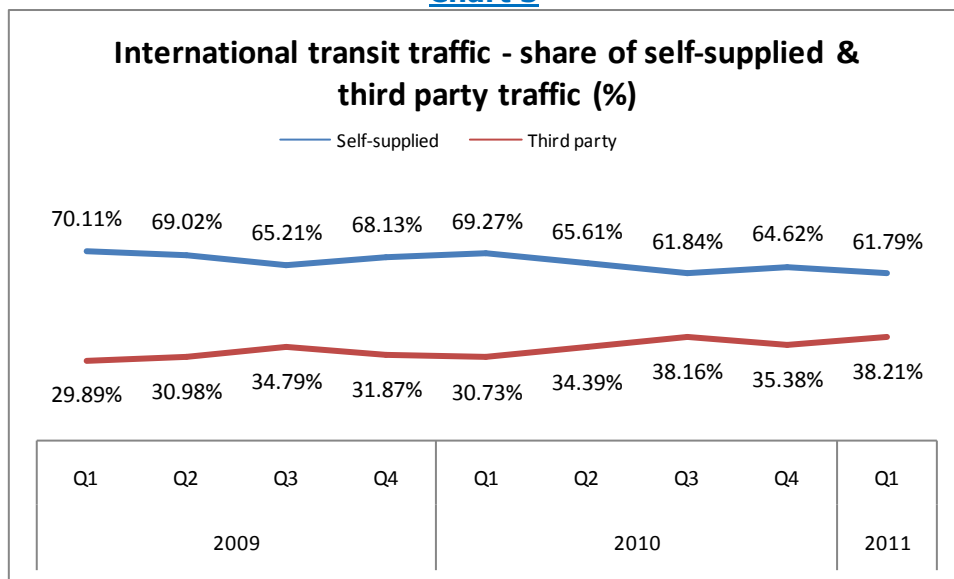
*ii. International transit traffic volumes*

International transit traffic volumes increased significantly over the last two years. However, contrary to developments for national transit traffic, the said increase is a result of higher volumes reported for third party international transit traffic. On the other hand, self-supplied international transit traffic did not register any significant changes in traffic volumes.

In absolute terms, international transit traffic increased from 32.14 million minutes in Q1 2009 to 36.06 million minutes in Q1 2011.

As at Q1 2011, third party international transit traffic accounted for 38.21 percent of all international transit traffic reported for the period, up from 29.89 percent in Q1 2009. The share of self-supplied international transit traffic accounted for the remaining 61.79 percent, down from 70.11 percent in Q1 2009.

**Chart 3**

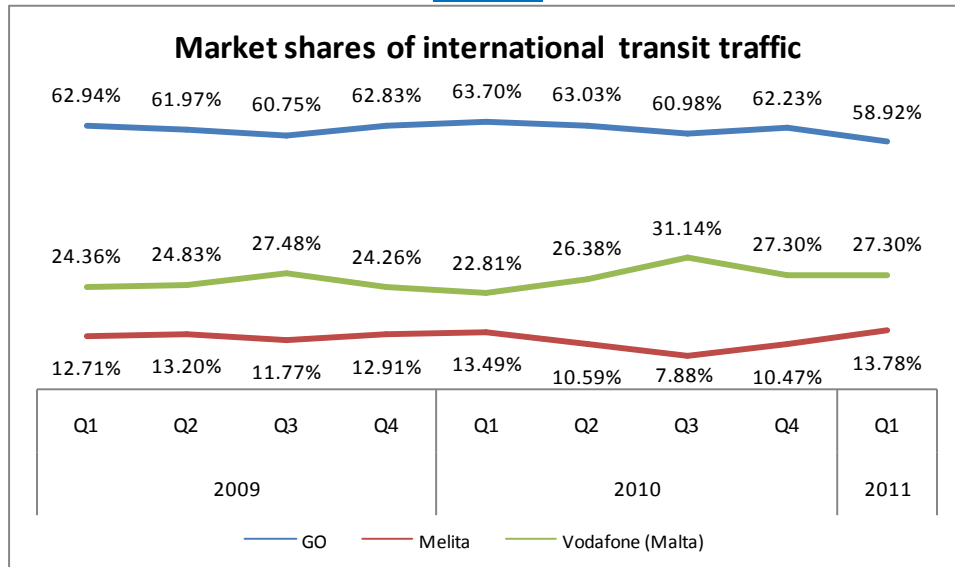


The increasing share of third party international transit traffic is a result of the following:

- ✚ an increase in demand for international transit services as a result of cheap international calling rates;
- ✚ significant investments in international connectivity, which strengthened competition on the basis of available market offers; and

- ✦ given that all MNOs are owned by CPs currently supplying wholesale transit services, self-supplied international transit traffic volumes increase in line to greater usage of mobile telephony services.

**Chart 4**



Turning to the analysis of market share by transit suppliers, Chart 4 shows that GO's market share declined from 62.94 percent in Q1 2009 to 58.92 percent in Q1 2011.

On the other hand, Melita's share increased from 12.71 percent to 13.78 percent, whilst that for Vodafone increased from 24.36 percent in Q1 2009 to 27.30 percent in Q1 2011.

Chart 4 also confirms that, albeit at a lower pace than for national transit, the market shares of CPs providing international transit services are effectively converging.

The tendency observed amongst newer market entrants, namely Melita and Vodafone (Malta), to gain market share at the expense of the incumbent operator, GO, would suggest that none of the above-mentioned suppliers enjoy any significant advantage over competitors<sup>29</sup>. Developments in market shares are also evidence of a competitive market based on competition between suppliers which are able to handle larger volumes of traffic and thereby higher levels of switching activity.

Therefore, based on a market share analysis, the MCA concludes that no supplier of national and international transit can act independently of competitors by setting prices above the competitive level.

## B. Barriers to expansion

There are circumstances wherein growth and expansion on the part of service providers, particularly newer market entrants, is inhibited by markets which are mature and saturated, and which display significant barriers to entry. There is indeed a strong correlation between barriers to entry and barriers to expansion, because the higher the

<sup>29</sup> In its submission GO states that it expects its declining market share to 'be sustained over the coming years, due to aggressive marketing operations'. GO also expects that, 'with the new spectrum licences being granted', mobile operators 'will be able to roll out a new LTE network in the short term, thus putting further pressure on GO's market share in the international transit market'.

barriers to entry the less likely for alternative operators to be in a position to expand output sufficiently quickly in response to a price increase by a hypothetical monopolist.

There are several factors which could deter the onset of additional supply in any of the identified wholesale transit markets. These include economies of scale and scope enjoyed by large and incumbent operators, vertical integration, barriers to switching, and control of infrastructure not easily replicated.

The current review has already concluded that, to a certain extent, vertical integration, economies of scale and scope and control of infrastructure not easily duplicated could constrain market entry and inhibit market expansion. However, the assessment of the first criterion has shown that possible obstacles to market entry are not insurmountable.

It has also been shown that existing suppliers of wholesale transit services have sufficient spare capacity to offer additional transit services. No supplier can actually behave independently of competitors as all service providers are offering a ubiquitous service and have sufficient capacity to handle larger volumes of transit traffic. No supplier can also behave independently of the wholesale customers as these can easily switch from one service provider to another without incurring significant additional costs. This has been clearly evidenced in the way market shares and the network infrastructure have developed over the last few months.

The MCA therefore concludes that there is no evidence to suggest the presence of significant barriers to expansion in the provision of wholesale transit services within the timeframe of this review.

### C. State of competition

The MCA assesses the state of competition in the identified wholesale transit markets on the basis of traffic reported between transit suppliers and CPs requiring such services. During the past year the MCA has not observed any problems with respect to the provision of wholesale transit services on the part of any transit providers. In this regard, it is worth noting that all transit agreements in Malta have been signed on a commercial basis and did not require any regulatory intervention.

During negotiations undertaken between CPs, the MCA did not register any complaints as to unfair practices and discrimination in the provision of wholesale transit services. Neither did it register complaints related to the setting of unfair prices, which could undermine the commercial interests of CPs purchasing transit services. The way wholesale transit markets developed in Malta over the last few years makes it very unlikely for transit providers to charge uncompetitive rates, especially as purchasers of transit can easily switch between existing suppliers.

At present, three CPs are offering national and international transit services. This review has already shown that the market shares of CPs providing wholesale transit services have been converging over the last two years. In particular, this review has shown that, given the state of competition and Malta's particular circumstances, none of the CPs providing wholesale transit services can abuse of its market position and that existing and potential purchasers of transit services can exert CBP on transit providers given that their service providers are competing directly against each other.

A further indirect constraint on existing transit providers comes from direct interconnection, through which CPs currently purchasing transit services could decrease their need for such services. Market shares of transit providers are therefore expected to converge even further over the next two years.

The MCA therefore concludes that, given the circumstances, the state of competition in the provision of wholesale transit services leaves little possibility for any transit provider to restrict competition within the timeframe of this review.

#### Conclusion on the assessment of the second criterion

The MCA concludes that no supplier currently enjoys SMP in the provision of wholesale national and international transit services. The MCA therefore considers the identified wholesale transit markets as being effectively competitive, and to remain competitive within the timeframe of this review.

In their response to consultation, GO and Vodafone agree with the MCA's assessment of the second criterion and the finding that the identified markets are competitive.

However, the OC is concerned that 'the market review fails to explain in an adequate manner how the developments in the share of self-supplied and third party international transit traffic (as explained in Chart 3 of the consultation document) has each affected the market shares of every transit provider as shown in Chart 4'.

The MCA notes that third party international transit traffic volumes have been increasing since 2009, from 49.54 million minutes to 57.59 million in the following year. There are indications that third party traffic will increase further in 2011 as traffic volumes recorded Q1 2011, at 13.78 million minutes, by far exceed traffic volumes registered in Q1 2009 and Q1 2010, at approximately 9.70 million minutes in each quarter.

On the other hand, the rate of increase in terms of self-supplied traffic volumes was much lower, up from 104.46 million minutes in 2009 to 106.5 million minutes in 2010. Self-supplied traffic volumes in Q1 2011, at 22.28 million minutes, are lower than volumes recorded in Q1 2009, at 22.54 million minutes, but slightly higher than in Q1 2010.

The above suggests that Vodafone and Melita have successfully gained market share on the basis of developments in third party transit traffic, for which volumes have been increasing over the past years. This implies that Vodafone and Melita are capable and in fact succeeding to increase their market presence at the expense of GO.

Given that all operators providing wholesale international transit services have sufficient spare capacity available, all operators are in a position to meet new demand for wholesale transit services. This means that Melita and Vodafone are in a position to compete with GO and possibly increase their market share within the timeframe of this review.

Latest market developments show that, as demand for wholesale international transit services increased, both Melita and Vodafone registered gains in their market share. As alternative operators consolidate their market presence, more competitive pressure is exerted on GO.

Market shares are also expected to converge further within the timeframe of this review, as third party demand for the aforementioned services increases. The MCA believes that, given the prevailing market conditions and expected market outcomes, the market for international transit will continue to expand leaving no operator with sufficient market power to behave independently from competitors.

The OC also makes reference to paragraph 75 of the Commission guidelines on market analysis and the assessment of SMP which states that 'the fact that an undertaking with a significant position on the market is gradually losing market share may well indicate that the market is becoming more competitive, but it does not preclude a finding of significant market power.'

The MCA has taken note of the reference made by the OC to the SMP guidelines. The MCA agrees that falling market shares of an SMP operator are not necessarily indicative of a competitive market outcome. However, the MCA notes that the SMP guidelines also state that “fluctuating market shares over time may be indicative of a lack of market power in the relevant market’ and that ‘market shares alone is not sufficient to establish the possession of significant market power (dominance)”.

In view of the analysis carried out above, the MCA recalls that the market share of GO has been declining constantly over the last two years and this trend is likely to continue over the time frame of this review. Furthermore, the current market structure, with three fully fledged competing networks, ensures that none of the transit providers is able to exercise any market power over the other providers, thus ensuring a level playing field in the provision of wholesale transit services. The MCA also reiterates that converging market shares in the provision of national and international transit services are indicative of the competitive pressures in the national and international transit markets. Finally, the MCA underlines that over and above converging market shares, it has also outlined other factors in its review that are indicative of a competitive scenario in the identified markets.

Therefore, the MCA also concludes that, on the basis of the current market conditions and foreseen market developments, the markets for national and international transit services are competitive and will remain so within the timeframe of this review.

### ***Assessment of the third criterion***

The Recommendation states that, *‘the decision to identify a market should also depend on an assessment of the sufficiency of competition law to address the market failures that result from the first two criteria being met’.*

The Recommendation also adds that, *‘competition law interventions are unlikely to be sufficient where the compliance requirements of an intervention to address a market failure are extensive or where frequent and/or timely intervention is indispensable’.*

In its assessment of the first and second criteria, the MCA has given careful consideration to factors which could inhibit market entry and potentially restrict competition within the timeframe of this review. In this regard, the MCA did not identify high and non-transitory barriers to entry. It also establishes that no operator enjoys a dominant position on the examined markets and that such markets are effectively competitive. The preliminary conclusion is that the first two criteria are not met when examining the Maltese wholesale transit markets.

In its assessment of the third criterion, which is being carried out without prejudice to the findings and conclusions in the assessment of the first two criteria, the MCA considers to what extent it is possible to assume that restrictions on competition or potential market failures may still arise in the wholesale transit markets. In this perspective, the MCA assesses whether competition law by itself is sufficient to provide adequate redress to market shortcomings.

The MCA notes that, given the characteristics of the examined markets, none of the local suppliers can afford to engage in anti-competitive behaviour by increasing the price of its service(s). No supplier can actually behave independently of competitors as all service providers are offering a ubiquitous service and have sufficient capacity to handle larger volumes of transit traffic. No supplier can also behave independently of the small number of wholesale customers as these can easily switch from one service provider to another without incurring significant additional costs. This has been clearly evidenced in the way market shares and the network infrastructure have developed over the last few months.

The MCA deems it very unlikely for these characteristics to change within the timeframe of this review and therefore concludes that there is limited scope for competitive shortcomings in the wholesale transit markets in the foreseeable future.

This means that, in the absence of *ex ante* regulation, the OC can effectively deal with any potential issues that may arise in the local wholesale transit markets through *ex post* powers.

#### Conclusion on the assessment of the third criterion

The MCA concludes that competition law by itself is adequate to address any potential market failures in the wholesale transit markets.

All respondents to consultation agree with the MCA's assessment of the third criterion and the finding that the OC can adequately deal with market shortcomings in the absence of *ex ante* regulation.

#### Conclusions based on the findings from the three criteria test

On the basis of findings from the three criteria test, the MCA concludes that:

- A. wholesale transit markets in Malta do not exhibit high and non-transitory barriers to entry, being either of a structural, legal, or regulatory nature, exist in the identified markets;
- B. wholesale transit markets in Malta are effectively competitive and are expected to remain so within the timeframe of this review; and that
- C. Competition law by itself is adequate to address potential market shortcomings, should these arise in the absence of *ex ante* regulation.

The MCA also concludes that no undertaking is in a position to enjoy SMP in the provision of wholesale national and/or international transit services.

## 4. Regulation

### *Background to regulation*

In accordance with regulation 5(4) of the ECNSR, where an operator is designated as having significant market power (SMP) on a relevant market, either individually or jointly with others, the MCA is obliged to impose on such operator appropriate regulatory obligations, referred to in sub regulation (2) of regulation 5 of the ECNSR, or to maintain or amend such obligations where they already exist.

However, in accordance with regulation 5(3) of the ECNSR, where the MCA concludes that a finding of dominance cannot be ascertained, the MCA is not allowed to impose or maintain any specific ex-ante regulatory obligations. In the case where no SMP designation is made and where regulatory obligations already exist in the market, the MCA, in accordance with regulation 5(3) of the ECNSR, is to withdraw such obligations placed on undertakings subject to an appropriate period of notice to be given to all parties affected by such withdrawal of obligations.

### *Existing obligations*

Prior to the revision of the EU Recommendation, the wholesale national and international transit markets currently under analysis were considered as part of the markets susceptible to *ex ante* regulation.

In accordance with its powers under the EU Regulatory Framework for Electronic Communications, the MCA carried out its first round of market reviews with respect to the provision of wholesale transit services in 2006. Whilst no undertakings were found to enjoy SMP in the provision of wholesale national transit services, the MCA identified GO as having a SMP in the provision of wholesale international transit services<sup>30</sup>. Following this finding, the MCA imposed a number of regulatory obligations on GO, mandating this operator to:

- provide sufficient access to, and use of, specific network facilities to undertakings making reasonable requests for international transit facilities and services;
- provide all access obligations on terms and conditions which are fair, reasonable, and timely and which do not differ from those provided by GO to its retail arm, both with respect to standard and timeliness;
- publish international transit rates in the Reference Interconnection Offer (hereafter "RIO"), which shall be sufficiently unbundled so as to ensure that undertakings are not required to pay for other facilities other than those required for the provision of international transit;
- include pricing, terms and conditions, and service level agreements as directed by the MCA in the transit offer;
- apply a cost oriented pricing methodology to ensure fair and efficient access to GO's network and services, by implementing a cost-based accounting system; and

---

<sup>30</sup> As specified in the MCA market review for [http://www.mca.org.mt/sites/default/files/articles/Wholesale\\_call\\_OrigTerm%26TransFixed\\_0.pdf](http://www.mca.org.mt/sites/default/files/articles/Wholesale_call_OrigTerm%26TransFixed_0.pdf)

This review has been published in 2006.



- implement accounting separation so as to ensure that prices charged are non-discriminatory.

### ***Decision on regulatory intervention***

The MCA concludes that the identified wholesale transit markets are competitive and that no undertaking enjoys SMP in the provision of wholesale transit services.

Given these conclusions and the provisions under regulation 5(3) of the ECNSR, the MCA therefore will not mandate regulatory obligations on undertakings active in any of the identified wholesale transit markets.

The MCA shall therefore withdraw existing regulatory measures governing the provision of wholesale international transit services by GO plc. This withdrawal shall be implemented without prejudice to any other general obligations of GO and any other obligation at law.

In order to have a smooth transition from a regulated market to a non-regulated market, the MCA shall withdraw the existing obligations within 30 calendar days following the publication of the final decision concerning this market. This is in Accordance with regulation 5(3) of the ECNSR. The MCA believes that this notice period is justified and sufficient to allow for all stakeholders to make necessary arrangements for the new regulatory approach to the wholesale international transit market.

The MCA has received no objections<sup>31</sup> in view of its conclusion that there is no scope for further *ex ante* regulatory intervention in the provision of wholesale international transit services in Malta.

### ***Future monitoring and reviewing of wholesale transit markets***

The MCA considers that, given the dynamic nature of the local wholesale transit markets identified in this market review, it is important to keep a close watch on the progress and developments in such markets.

To this end, the MCA intends to analyse market trends and developments on an ongoing basis, and remains committed to issue a new market analysis at any point in time in response to any deterioration in the competitive level of the identified markets.

---

<sup>31</sup> GO and Vodafone effectively agree with the MCA's conclusion that no operator enjoys SMP in any of the identified markets and that therefore *ex ante* regulatory intervention is no longer warranted in the said markets.

## Annex



**MCCAA**

MALTA COMPETITION AND  
CONSUMER AFFAIRS AUTHORITY

Office for Fair Trading, Cannon Road, St Venera, SVR 1411, Malta  
Tel: +356 2144 6250-5, +356 2149 6888 Fax: +356 2144 6256

Office for Competition

Our Ref.: COMP-CCD/46/08

011070

31 August, 2011

Ing. Philip Micallef,  
Executive Chairman,  
Malta Communications Authority,  
Valletta Waterfront,  
Pinto Wharf,  
Floriana FRN1913.



Dear Ing. Micallef,

The Office for Competition (OC) has been asked to provide its opinion in respect of the outcome of the Malta Communications Authority's (MCA) review and market analysis of transit services in the public telephone network provided at fixed locations.

The OC agrees with the MCA's definition of the wholesale transit market and the assessment of the first and third criteria. However, with respect to the market shares of international transit traffic provided by transit suppliers, the OC is of the view that the market review fails to explain in an adequate manner how the developments in the share of self-supplied and third party international transit traffic (as explained in Chart 3 of the consultation document) has each affected the market shares of every transit provider as shown in Chart 4.

The OC, moreover, makes reference to paragraph 75 of the *Commission guidelines on market analysis and the assessment of significant market power under the Community regulatory framework for electronic communications networks and services (2002/C 165/03)* which states that "the fact that an undertaking with a significant position on the market is gradually losing market share may well indicate that the market is becoming more competitive, but it does not preclude a finding of significant market power."

The OC would like to point out that its views are being submitted in the context of the specific provisions of the above-mentioned guidelines and it reserves the right to re-examine any or all of the issues underlying these MCA recommendations in the light of facts and evidence that may arise in specific future cases before it.

Yours sincerely,

*S. Aquilina Zahra*

Dr Sylvann Aquilina Zahra  
Director General (Competition)