

# **SWEDEN**

## **INTRODUCTION**

During 2008, market trends continued to be positive in Sweden, as a consequence of relatively effective regulation. Competition in the mobile sector intensified, finally benefiting from the regulation of mobile call termination. Traffic in mobile data services has doubled since 2006.

Operators were looking forward to the finalisation of the second round of market analyses, since current regulation no longer seems suitable to address market deficiencies and technology developments, in particular as regards fibre. In the meantime, an amendment to the law on electronic communications entered into force enabling the regulator to take steps leading to imposition of functional separation.

## **REGULATORY ENVIRONMENT**

### **Main regulatory developments**

In June 2008, the national regulatory authority (NRA), Post- och telestyrelsen (PTS), published its next generation access (NGA) strategy on the regulation of dark fibre. Even though the outcome of the analysis falls short of the expectations of the alternative operators, the study, which was one of the first of its kind in the EU, analysed the current market situation, and concluded that, in the light of positive market trends such as the number of stakeholders providing dark fibre at the wholesale level, it was not justifiable to define a specific market for dark fibre. Nevertheless the market would require continuous monitoring.

In July 2008 the new provisions empowering the NRA to impose functional separation on the incumbent entered into force. Under the national law, fibre access networks will not fall under the scope of functional separation. The Commission services are looking into this matter.

### **Organisation of the NRA**

The enforcement of remedies remains a key challenge for a highly motivated NRA team of experts. However, although the regulator has shown proactivity in the area of mobile call termination markets (with mobile termination charges amongst the lowest in the EU), market players point to the lack of self-initiative on the complex broadband markets.

The National Competition Authority (NCA) is continuing to work with PTS on the second round of market analyses, while pursuing investigations launched during 2007 (e.g. non-provision of access to dark fibre).

In September 2008, the Commission initiated infringement proceedings against Sweden, based on a complaint from an operator. The national electronic communications legislation, as interpreted by Swedish Courts, appears to limit the authority of PTS to settle disputes regarding terms and conditions of interconnection agreements which are the subject of negotiations between undertakings. The Ministry of Enterprise, Energy and Communications has prepared legislative proposals to address this issue, as well as an issue regarding appeals,

which is the subject of a pending infringement proceeding. The proposals are expected to be adopted in 2009.

## **Decision-making**

No notifications were presented to the Commission services in 2008. Still within the context of the second round of market analyses, PTS continued to work on wholesale interconnection markets as well as on the market for access to the public telephone network at a fixed location, which were expected to be notified in the first half of 2009. The consultation of market players on draft decisions with market players began in the second half of 2008. The proposal to withdraw regulation from the market for transit services in the fixed public telephone network received attention from a number of operators concerned that this would harm their future position on the market. In addition, PTS started preparations for the analysis of the three broadband-related markets in the context of its recent broadband strategy, with notifications expected in the first half of 2009, and also initiated the analysis of the broadcasting transmission services market. PTS intends to deal with the mobile market later on in 2009.

The second-round reviews of the physical network infrastructure access market (i.e. local loop unbundling (LLU) market) and the wholesale broadband access market appear to raise complex issues, such as geographic differentiation of national markets and the treatment of next generation access (NGA) investments. The regulator has contacted the Commission services on several occasions to exchange relevant information in this regard.

The first-round ‘significant market power’ (SMP) decisions on the wholesale mobile call termination market, which have been subject to lengthy appeals, have finally been upheld by the Swedish Courts.

The infringement initiated in October 2006, concerning the incorrect application of provisions of the regulatory framework on the right to appeal, was still pending. According to national law, conditions stricter than those provided by the Framework Directive do not allow all market players to appeal certain decisions of the NRA. The European Court of Justice preliminary ruling adopted in 2008 (C-426/05, Tele2 vs. TCK) provided some useful indications in a similar case. According to a government proposal made in 2008, the provisions on the right of appeal would be interpreted as also benefiting undertakings in competition with the addressee of a SMP decision. It remains to be seen whether such a solution, amending the ECA, would meet the requirements of the regulatory framework.

More generally, systematic appeals and lengthy procedures continue to represent a major source of uncertainty in the marketplace, in particular since Court decisions on appealed SMP obligations cannot be enforced retrospectively. Also it would appear that the regulator has the authority only to settle disputes from the date when the disputes as such arose between operators, even though breaches of significant market power obligations were established prior to the launching of the dispute in question. An additional issue is that the Swedish Civil Courts would not be authorised to resolve the disputes. This would mean that SMP operators might have a very low incentive to comply with the imposed remedies before other operators had started any disputes. The Commission services are looking into the matter.

The NCA, as a result of an investigation in a margin-squeeze case concerning non-regulated retail products in 2001-2003, proposed to the Stockholm City Court to impose a fine of €13.7 million on the incumbent. While no decision has been taken yet by the Stockholm City Court, the proposed decision is not suspended.

## MARKET AND REGULATORY DEVELOPMENTS

Revenue in the electronic communications sector in 2007 equalled €6 396 million<sup>116</sup>, an increase of 2.03% since 2006. Both the fixed and the mobile market registered slight declines compared to 2006, and generated €2 109 million and €1 820 million respectively. The share of the electronic communications sector revenue in GDP was 1.93%, which is below the EU average of 2.90%. With €1 157 million<sup>117</sup> in 2007, the sector invested 4.27% more compared to 2006. The incumbent invested €331 million (€55 million more than a year ago) and mobile operators injected some €349 million (an increase of €113.5 million since 2006). The fixed alternative operators were the only category of market players with reduced investment, €134 million in 2007 compared with €192.5 million in 2006. The share of investment in GDP stood at 0.35%.

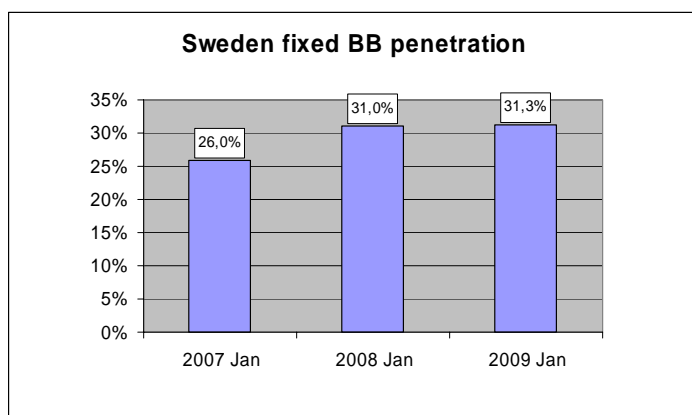
Despite the ever-increasing traffic on mobile networks, the total called minutes in the mobile networks (34%) still lag behind the number of total called minutes in the fixed networks (66%).

The government plan to sell off the remaining State holding in the incumbent failed after the Swedish incumbent's board rejected the French incumbent's initial €33 billion bid as substantially undervalued, thereby failing to produce an agreement on financial conditions.

### Broadband

#### *Market situation*

In January 2009 broadband penetration, in terms of fixed lines per 100 inhabitants, was 31.3%, placing Sweden third in the EU. The growth of fixed broadband lines slowed considerably, and grew by only 0.3 percentage points between January 2008 and January 2009, partly owing to a decrease in the number of unbundled local loop (LLU) lines.



The share of technologies other than DSL grew from 37.7% to 38.3% in the last 12 months. The incumbent's share of retail broadband lines grew to 39.5% in January 2009 compared to 37.7% in January 2008, still well below the EU average. In addition,

mobile broadband is delivered to an increasing number of end-users, and there were some 604 000 mobile broadband users using dedicated data service cards/modems/keys in January 2009, which represents 6.6% penetration. Some 84% of all fixed broadband lines are able to deliver speeds greater than 2 Mbps, and Sweden is the leading EU country in terms of connections permitting speeds exceeding 10 Mbps.

<sup>116</sup> In addition to the reported revenue figures for the fixed and the mobile market, the figure for total revenue also includes revenue from wholesale operations.

<sup>117</sup> In addition to the reported figures for investment by the incumbent, mobile operators and fixed alternative operators, the figure for total investment also includes investment by Internet-only operators and wholesale investment.

Ownership of broadband networks by municipalities has doubled from 2003 to 2007. Some 150 municipality-owned companies are also key investors in fibre. This increasing pace of investment, fuelled by considerable public financing, is in contrast to a slowdown in the growth of the rest of the economy.

National DSL coverage increased from 95% at the end of 2006 to 98% at the end of 2007, and DSL coverage in rural areas stood at 90%, an increase of 6 percentage points over a year. For cable, coverage in rural areas is 17% compared to 48.3% at a national level (64% urban only coverage). Sweden managed to narrow the digital gap for DSL coverage over a year, from 11.3 to 7.8 percentage points, whereas cable coverage registered no progress over the same period.

### *Regulatory issues*

In 2007, in the spirit of the voluntary separation announced, the incumbent had set up a new entity responsible for the management of a full set of passive products (i.e. copper products in particular and ducts). According to the SMP operator this should ensure equal treatment of all market players. Furthermore, in the summer of 2008, the incumbent established the 'Equality of Access Board', which initially aimed at increasing market certainty and transparency through the planned publication of regular reports on key performance indexes, also covering the activities of another wholesale unit of the incumbent, responsible for sales of active network elements (e.g. WLR and bitstream, but not fibre). However, later in 2008, the incumbent decided not to publish these reports.

Price regulation has been successful in several cases over recent years. For example, the total monthly cost for fully unbundled local loops fell to €9.2 in 2008 from €10.1 in 2007 and is below the EU average (€10.9). The monthly cost for shared access fell by 12.0% to €5.1, which is, however, still slightly above the EU-27 average (€4.1). Connection prices for fully unbundled local loops (€44.6) finally dropped below the EU average of €57.5, while monthly rental fees (€7.9) decreased below the retail PSTN rental price of the incumbent (€9.7), as did installation and enquiry fees, further to the October 2008 decision of the Swedish Court. This was expected to prompt alternative operators to increase the number of fully unbundled local loops beyond that of shared access lines.

However, issues other than price appear to have a strong impact on the behaviour of the market players. Reported preferential treatment by the incumbent's retail unit (e.g. much longer delivery times for competitors) and non-availability of information on collocation sites, street-cabinets and backhaul appear to have placed significant limits to the planning activities of alternative operators. This has led PTS to impose obligations requiring the incumbent to regularly publish information, as part of the reference unbundling offer (RUO) remedies, facilitating migration of customers. PTS also issued injunctions requiring equal treatment and the obligation to handle manual order requests within two weeks, while recommending the setting-up of an automatic ordering process as soon as possible.

A number of operators consider prices for access to (unregulated) dark fibre as prohibitive. In addition, the incumbent has refused to provide access to fibre that would connect MDFs, enabling connections with alternative operators' DSLAMs and networks, and has not provided any access to ducts affected by new road works. In the summer of 2008, the Swedish Courts finally upheld the incumbent's appeal, which challenged a PTS decision during the first round of market analysis, and considered that fibre backhaul may not be a part of LLU, nor could it be regarded as an ancillary service.

While PTS pointed to the likely existence of significant market power, and acknowledged competition issues in its June 2008 study on dark fibre, it appears to prefer monitoring market developments, taking action only if competition does not materialise over a certain period of time. PTS intends to publish a follow-up to the study in the second quarter of 2009.

In the meantime, however, significant parts of Sweden (some 2.4 million households) do not enjoy any competition, and a number of alternative operators might initially prefer to seek a simpler access form such as reasonably priced bitstream access. There is still no effective uptake of the bitstream/wholesale broadband access market despite several existing framework agreements. According to alternative operators, high entry costs are a sizeable impediment, if one has to compete with the incumbent's low retail prices. Also, the content and quality of service cannot be replicated, given that the incumbent has no obligation to provide other data-based services on a wholesale level. PTS's binding opinions, ordering that bitstream products be offered to all competitors on an equal basis, were suspended when the incumbent contested the content of the reference broadband offer (RBO) before the Swedish Courts in the summer of 2008.

State-financed networks, which have a 12% retail market share, may represent another important challenge for the further development of the broadband market. Alternative operators are concerned that wholesale access is not always available to competitors. PTS has reinforced the dialogue with the Swedish Urban Network Association, pressing for conditions that would facilitate wholesale access to both ducts and municipality-owned dark fibre. In addition, some municipalities provide active, lit-fibre products that compete directly with market players at the retail level. The Commission services are looking into the matter.

## **Mobile markets**

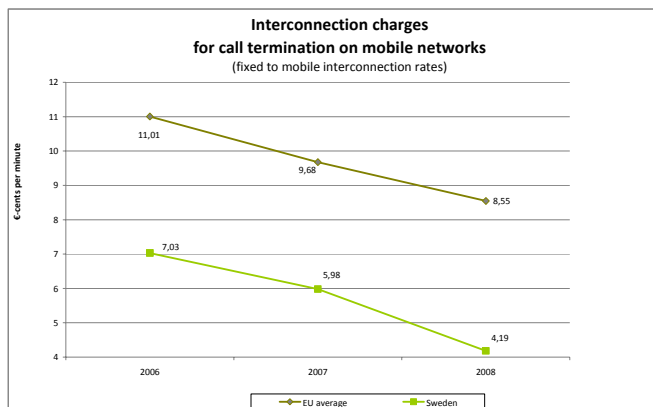
### *Market situation*

Mobile market penetration increased by some eight percentage points to 114.6% over one year, which was under the EU average of 119%. The incumbent's market share (43%) in October 2008 was on a par with 2007. The average revenue per user (ARPU) across the sector in 2007 was €296, and above the EU average of €282, and reflects continuously falling call prices. Attractive price schemes, complemented by stronger use of data services, contributed to a three percentage point increase of post-paid subscriptions (56% in October 2008).

In July 2008, there were three operators offering both 2G and 3G (UMTS) services, one 2G operator and one 3G operator. In addition there was another 3G operator in the 450 MHz band which started to provide services in 2008, three MVNOs and a handful of small-sized resellers.

## Regulatory issues

The 2004 SMP decisions on the wholesale mobile call termination market, which had been subject to lengthy appeals, have finally been upheld by the Swedish Courts thereby eventually casting some legal certainty on this market. The mobile termination rates (MTR), regulated by a decision of October 2008, which apply to all mobile network operators, stood at €0.0419, and for the first time, the mobile



operators chose not to appeal the recommended level. This is significantly lower than the reference level of €0.0598 a year ago, and makes Sweden the second cheapest Member State.

Despite fairly low and symmetric MTRs, PTS is determined to step up the current price regulation, to narrow the gap between MTRs and fixed termination rates (FTR), which is currently disadvantaging fixed operators.

However, operators are concerned that further decreases of MTRs, in addition to current operating costs associated with the maintenance of numerous base stations, high usage fees for 3G and high auction costs for upcoming 4G licences, might endanger future investments, while fixed termination rates (FTR) are not subject to similar reductions.

## Roaming

All GSM operators appear to have implemented the requirements set by the Roaming Regulation to a satisfactory degree. According to PTS, in the second half of 2008 retail international roaming prices were falling below the regulated Eurotariff levels, and in the case of one operator they were up to 30% below the marker.

As to data roaming, the retail prices of international transactions on average exceeded the prices for domestic traffic by four times. Accounting intervals for calls increased from 10 to 60 seconds, compensating for regulated voice call tariffs. Several consumers complained about issues of inadvertent roaming.

## Fixed

### Market situation

Around 40% of subscribers used an alternative service provider for national and international voice telephony services in July 2008, whereas the subscribers still choose the incumbent for direct access in 88% of cases (the EU average is 6.6 percentage points lower). In total there were 75 fixed operators, offering public voice telephony services, of which 60 were VoIP operators.

The incumbent controlled 58% of the fixed voice market at the end of 2007, measured in terms of revenue, one percentage point above the reference mark in the beginning of 2007. The share by revenue of alternative operators in the international calls market fell by four percentage points, compared to a year ago, and stood at 57%.

### *Regulatory issues*

The appeal pending since 2006 against the decision on fixed call termination and its LRIC model has created further legal uncertainty in 2008.

Whereas retail price competition, leading to low price levels, has been quite intensive, wholesale competition still needs further improvements. As an illustration, the WLR product, priced at €8.2 (retail minus), and coupled with a €48.7 installation fee, does not sell well, given that the incumbent competes for the same customer base by charging no connection fee at all.

## **Broadcasting**

### *Market situation*

Competition between platforms continues to intensify, in particular at the expense of terrestrial and satellite TV. While analogue terrestrial broadcasting licences expired in February 2008, digital terrestrial TV was serving approximately 16% of Swedish households in 2008, and also about 16% of homes watched satellite TV. Cable TV with nearly 59% and IPTV with more than 8% of households have been the clear winners of 2008. IPTV subscriptions, with 3.88% of the population, represent the fourth highest figure in the EU.

### *Regulatory issues*

The regulation of the wholesale broadcasting transmission market is the subject of ongoing appeals. As soon as the SMP operator in December 2007 withdrew its appeal from the highest Administrative Court regarding analogue terrestrial transmission obligations, the SMP operator in February 2008 asked PTS to revoke its recent SMP decision on digital terrestrial transmission. The SMP operator's request was dismissed but it further appealed the decision to the Supreme Court, the remedies not being suspended. On 11 September 2008 the Court decided to reject the appeal. The SMP operator also appealed another decision of the NRA in relation to price adjustments for the distribution of content for analogue radio and digital TV. This case is still pending.

The SMP operator's regulated transmission prices, which are based on a fully distributed cost (FDC) methodology, might have had some negative effects on the market. Recently, one of the free-to-air broadcasters opted to leave the broadcasting market.

In 2008, the focus of the Swedish Radio and Television Authority (RTVA) shifted towards resolving conditions and issues between the holders of application programming interface (API) and electronic programme guide (EPG) licences, including issues of conditional access, subscriber management services (SMS) and pay TV. Based on the amended legislation which entered into force in February 2008, RTVA in March 2008 granted licences for six frequency channels in the UHF band to 23 broadcasters nationwide and 13 broadcasters on a regional level. RTVA will further review licensing conditions in March 2009. Broadcasters are now in principle free to choose any network operator, even though only one operator is currently active in the terrestrial pay-TV market.

## **Horizontal regulation**

### *Spectrum management*

In December 2007, the government decided to dedicate part of the spectrum released as a result of the switchover to digital broadcasting transmission (the 'digital dividend'). It is expected that a multiplexer (MUX) 6 will be established in the 490-790 MHz band, while another MUX will be set up in the VHF band. Awarding of licences is tentatively scheduled for late 2009.

As for the 2.6 GHz band, which is suitable for 4G services, in the spring of 2008 PTS organised an auction (the first of this kind in the EU) which ended in May after 112 rounds. The total amount paid for licences was €226 million, with five bidders winning licences for provision of mobile and wireless broadband.

Another bandwidth, in the range of 28 GHz, suitable for High Speed Packet Access (HSPA), is available for re-planning and block licences were being prepared by the NRA at the time this report was drafted.

The GSM licensing regime expires in 2010 (except for one operator whose licence expires in 2017). There were currently no guidelines or legal provisions indicating how PTS would proceed. This raises concerns amongst the operators, forcing market players to reconsider their investment strategies. In November 2008, the existing GSM licence holders asked PTS for changes in their licensing conditions. Changes would permit the use of other technologies than GSM in the 900 MHz band, and would take account of the need for a redistribution of the existing licences to make room for one additional 3G player, currently without a licence, in the 900 band.

The government initiated a spectrum/wireless policy review in 2007, which formally concluded in July 2008. The report suggests a number of proposals to amend the ECA and underlines key issues, such as enabling the use of mobile telephony and data communication services at an affordable price, anytime and anywhere, efficiency-guided spectrum licensing introducing block licences, together with new rules addressing the current uncertainty regarding licence renewal at expiry, and increased confidentiality at auctions.

Sweden has implemented all the Commission decisions on spectrum harmonisation.

## **THE CONSUMER INTEREST**

### **Tariff transparency**

PTS continued to run its web-based price comparison service successfully. The service includes price comparisons for fixed, mobile and internet for different user profiles.

### **Universal service**

According to the NRA's June 2008 report to the government, the regulator does not intend to impose any universal service (US) obligations for areas where no fixed or wireless infrastructure is available. Such an obligation would constitute an unfair burden on a potential US operator, since it would entail creating new infrastructure in remote areas without compensation, as there is no funding mechanism in the Swedish legislation. Tendering procedures have traditionally not been used either, in order to guarantee access in remote areas.

Remote areas may however be increasingly short of access to voice communications as a result of the incumbent's plans to remove a large amount of landlines. The Ministry of



Enterprise, Energy and Communications is currently working on a new Bill to provide solutions, such as satellite coverage or 450 MHz CDMA connection. In the long term (beyond 2010), a US fund may be introduced, with emphasis on technologically neutral obligations, and where fully functional Internet will replace analogue facsimile requirements.

Following an intervention of PTS earlier in 2008, three injunctions have been imposed on market players not complying with obligations concerning itemised billing during 2007. These operators are now complying with the requirements in question.

### **Number portability**

By October 2008, 3 074 325 mobile (29% of all mobile numbers), 863 769 fixed and 13 875 non-geographic number had been ported since its introduction, and prices for porting of numbers remain amongst the most attractive in the EU (from €2 for mobile to €4 for fixed numbers). Timing in particular appears to be an issue. Some alternative operators have voiced concerns that the time required for porting of numbers is too long (five working days for mobile and up to 15 working days for fixed numbers).

### **Consumer complaints**

While no major issues have been reported by consumer protection authorities in 2008, certain problems concerning unsolicited mail, operators' marketing activities (e.g. silent telephone marketing calls) and contract terms (e.g. a notice of termination of the contracts) required their attention. In October 2008, the National Board for Consumer Complaints settled a complaint on inadvertent roaming. Owing to the operator's lack of transparency concerning information on the risk of international roaming and insufficient burden of proof, the consumer was not held liable to pay the amount invoiced for a connection via a Finnish network.

Discriminatory treatment in the provision of mobile telephony services in Sweden was reported to the Commission services. Allegedly, mobile operators refuse to provide voice or data services in cases where the customer has no 'personal national registration number', which may be obtained only if the person is a permanent resident in Sweden or was born in Sweden.

In addition, the Consumer Protection Authority (CPA) performed a mobile phone content sweep, which revealed that the market requires more systematic investigation in 2009.

### **European emergency number 112**

112 is the single emergency number in Sweden.

According to the Eurobarometer Flash survey on the European Emergency Number 112 in February 2008, Sweden has one of the highest rates of awareness of the number in the EU (96% of Swedish respondents said they would call 112 in an emergency in Sweden).

As a measure providing support to disabled people, a trial service has been set up introducing the possibility of sending SMS to 112. A text relay service is also available through a web interface and it is possible to call 112 using a relay service for video telephony and a relay service for users with speech impediments.

## **Data protection**

A new 'Signals intelligence' legislation (FRA) has been adopted in order to strengthen the ability of public authorities to address terrorism and other national security threats in Sweden. Under the law, the Swedish national authority for signals intelligence will be able to monitor cross-border electronic communications, subject to certain restrictions with regard to privacy. However a number of market players, including some in neighbouring countries, were of an opinion that the law would create a barrier to trade and will result in operators losing a substantial number of business customers in particular.

In the meantime, infringement proceedings for non-communication of measures transposing the Data Retention Directive were ongoing.