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Telia

January 1997

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4 Mobile Telephony

4.1 Background

With a penetration of 27% as of November 1996, Sweden is one of the most advanced mobile markets in the world. Between 1981 and 1993, there were two analogue systems in the market, the NMT450 and NMT900, both operated by Telia on virtual monopoly basis.

The GSM market, which started in 1993, was deregulated from the outset and there are three nation-wide licences - Telia, NordicTel Holdings (Europolitan) and Netcom Systems (Comviq).

In 1996, a platform for a third mobile telephony network infrastructure was created by the authorities when DCS1800 licences were given to Telia, Comviq, Europolitan, and Tele8. These networks are expected to become operative from the end of 1997.

Telia's subsidiary Telia Mobitel markets mobile communication services. Apart from mobile telephony, Telia also offers paging and maritime services. Mobitel's revenues in 1995 amounted to SEK6.6bn.

In September 1996, Telia decided to reorganise its mobile operations. The responsibility of development of mobile and fixed services will be transferred to a single company, and the responsibility of the construction, development and operation of the mobile access network will be transferred to a separate company.

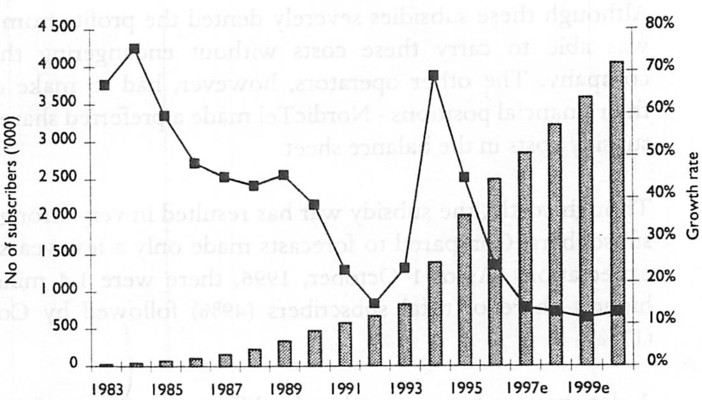
4.2 Market description

4.2.1 Growth

With the exception of the deep recession in the early 1990s, when GSM had not yet been introduced, mobile telephony has shown extraordinary growth figures in Sweden ever since its inception.

Number of mobile subscribers and market growth in Sweden

1983-2000e



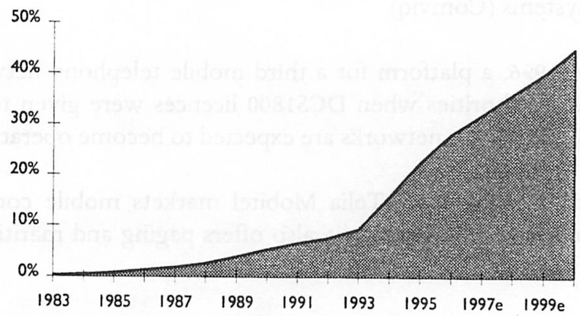
Source: Carnegie Research, FT Mobile Communications

The very strong recent growth - penetration has tripled in 36 months - is mainly due to one factor:

- The deregulated structure of the Swedish GSM-market, where three competing operators have subsidised handsets, and thus lowered the entry costs radically.

We believe these low costs of entry are sustainable, either because commissions are upheld or because hand set prices decline. In a growth-positive environment, we therefore estimate this will prevail and expect penetration to reach 45% at the end of 2000.

Mobile penetration in Sweden
1983-2000e



Source: Carnegie Research, FT Mobile Communications

4.2.2 Competition

Telia Mobitel was the first, and remains the most resourceful, mobile operator in Sweden. Revenues in 1995 were SEK6.6bn. Having operated the nation's two analogue networks, Telia Mobitel had more than 900,000 subscribers as it entered the GSM market in 1992.

The very profitable analogue operation enabled Telia Mobitel to get involved in the commission-driven acquisition of new digital subscribers that started in 1993. The initial driver was Comviq, which upped the stakes by offering heavy subsidies to attract new subscribers. This forced the other two operators to follow suit. Since 1993, the total amount spent by all three operators on GSM subsidies is SEK3.5-4.0bn.

Although these subsidies severely dented the profits from ongoing NMT-business, Telia was able to carry these costs without endangering the financial soundness of the company. The other operators, however, had to make concessions in order to retain their financial positions - NordicTel made a preferred share issue, while Comviq activated subsidy costs in the balance sheet.

Though costly, the subsidy war has resulted in very strong gains in the number of digital subscribers. Compared to forecasts made only a few years ago, growth has exceeded all expectations. As of 1 October, 1996, there were 1.4 million GSM users. Telia has the highest share of total subscribers (49%) followed by Comviq (32%) and Europolitan (17%).

A clear pattern has emerged in the different strategies of the three operators:

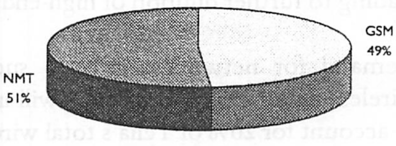
- Telia has targeted the whole market, both business and private users;

- Comviq has mainly approached the low-end private segment;

- Europolitan has aimed virtually exclusively at business users and the development of wireless datacom services.

Analogue vs digital 1996

Share of total mobile market, subscribers



Source: Carnegie Research

There are still close to a million analogue subscribers to fight for. So far, there have been few signs of anyone trying to actively woo these prospects - with the exception of the relatively few business users - mainly because of the significant subsidy costs inherent in such a campaign. However, several factors indicate that it is only a matter of time before it happens:

- A gradually reallocation of bandwidth - 2.4MHz is transferred to the GSM-networks annually in 1996 and 1997, leaving NMT with only half of its original bandwidth - will impede access and prompt analogue users to go digital.

- There will most certainly be an EU-ruling about end-dates for analogue networks. In the UK, it is already set for 2005.

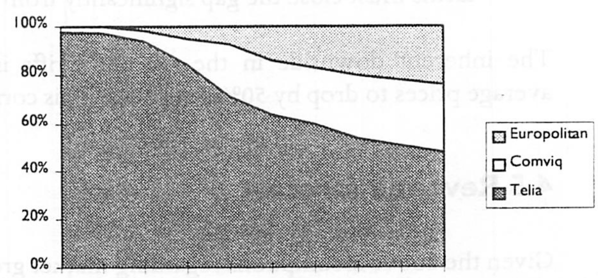
- The unquestionable technical advantages of the GSM standard and an increasing array of cost effective network services will make analogue networks an increasingly unattractive alternative.

- The DCS1800 networks will offer attractive services at competitive tariffs.

We expect this process to begin next year and to be virtually completed by 2000. Once the transition to digital really takes off, Telia has the advantage, as it has all analogue users as customers. Unlike the competition , it should be possible for Telia to offer very attractive 'change-of-standard' solutions. We therefore estimate that Telia will retain half of its currently analogue subscribers, while Comviq and Europolitan will split the remaining half. As for DCS1800, we believe Telia will get a market share equalling that of its GSM share. Again, we expect Comviq and Europolitan to divide the rest of the market between them. At this stage, we do not forecast any market share whatsoever for Tele8.

Market shares, 1991-2000e

(Subscribers)



Source: Carnegie Research

4.3 Volume

Today, basic services, i.e. voice communication, account for virtually all traffic volumes. In a market that already in the 1990s has seen a significant shift from business users to private subscribers, the average volume usage per subscriber has declined. Future volume developments will depend on three factors:

- Private subscribers will account for most of the future growth in penetration, leading to further dilution of high-end users.
- Demand for network services - such as SMS, voice mail, re-routing and wireless data communications - will increase significantly. We expect datacom to account for 20% of Telia's total wireless traffic volumes by 2000.
- The convergence of fixed and mobile communication - both voice and data - will accelerate as techniques such as wireless local loop and DECT become more readily available.

We expect Telia's traffic volumes per subscriber will increase by 10% annually up to 2001.

4.4 Tariffs

As far as tariffs are concerned, we can conclude that prices have held up well in the 1990s. Apart from adjustments in various tariff set-ups, especially concerning business users, prices per minute are virtually unchanged compared to 1993, when GSM was started. This is surprising given the otherwise tough competitive situation. However, it is attributable to one major factor:

- The unexpectedly high costs for new subscribers have created a certain pricing dilemma: all three players must optimise their revenue streams in order to facilitate future investments and there simply has been no room for lower prices.

This truce will not last forever, though. Prices will start to come down before long because of several driving forces:

- In order to attract subscribers, the DCS1800 networks will offer more competitive tariffs.
- Once balance sheets are repaired, it is likely that at least one of the current operators will try to increase its market share by cutting prices.
- As the boundaries between fixed and wireless telephony are disappearing, tariffs must close the gap significantly from today's levels.

The inherent downside in the current tariffs is therefore significant and we expect average prices to drop by 50% until 2001. This corresponds to a 13% annual erosion.

4.5 Revenue forecast

Given the above assumptions regarding market growth, Telia's standing in the market and ARPU (average revenue per user) development, the company's revenues from mobile telephony will largely come to a halt at levels around SEK7.7bn before the turn of the century.

What could alter this scenario is primarily usage: our forecast of a 10% annual growth in average volumes is based on current technology assumptions. The technology driver should not be underestimated.

If broadband radio materialises during our review period, it could lead to a significant increase in household datacom usage above our present estimates, as it would seriously enable wireless Internet access.

4.6 Capital expenditures in the mobile network

Telia's main investment needs for the next four years can be divided between capacity increasing investments in its GSM network and the roll-out of a new DCS1800 network. For the past three years, Telia's investment in mobile telephony has been between SEK734m to SEK1,230m annually. These figures include the roll-out of the nation-wide GSM-network. Going forward, we expect capital expenditures to increase initially due to DCS1800 and then to gradually decline. We thus estimate the investments to average SEK1bn annually.

5 Telia InfoMedia

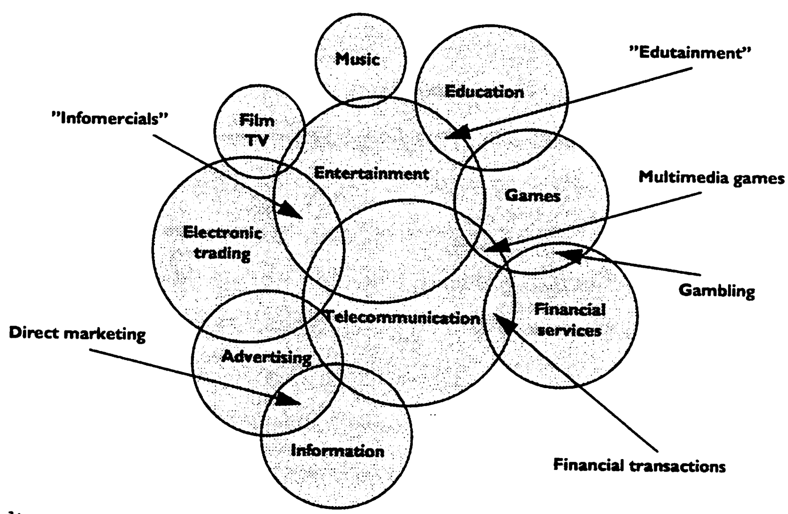
5.1 Background

Telia InfoMedia is the name of Telia's new business area for information- and media services. InfoMedia consists of Telia InfoMedia Reklam, Telia InfoMedia Respons and Telia InfoMedia Television. Total 1995 revenues for the business area were SEK3.5bn, including internal sales.

5.2 New media services

Fuelled by the exploding interest in the Internet, the integration between the media, entertainment and telecom industries, and the broadband capacity, an entirely new market is emerging for interactive media - telecom-based information services. Telia has decided to take advantage of this emerging market, as one of two new ways to expand revenue, according to its new strategy report '2001 Now', presented in mid-1996.

New media services
The industry conversion



Source: Telia

These new media services are one way for Telia to compensate for revenue lost on basic telecom services, as transmission becomes more of a commodity. But even more important is the fact that the content offered will be a vital requirement to attract future subscribers to the network and increase the traffic volume.

5.2.1 Content services

The ambition to provide subscribers with content over the network is probably the most important and most risky of the two new roads to revenue expansion, but also the one with the greatest potential:

- **Most important** because future subscribers will choose Telia for the type of services it provides and not because of its quality network. One example: subscribers to Internet may chose Telia as an Internet provider over Tele2 and

Telenordia due to Telia's licence agreement with AltaVista, the Internet search engine, and not because Telia's network is better.

- **Risky** as Telia does not have experience in the content business.

- **Greatest potential** because the telecom, IT and media industries are converging and about to enter a new era - connecting consumers to an on-line marketplace, the Internet. In this new era of the wired consumers, the network will be used to deliver any product made of bits rather than atoms.

Telia will market these new services through its InfoMedia companies, Telia InfoMedia Reklam and Telia InfoMedia Respons.

Telia's new multimedia strategy includes distribution - providing a platform where the content is presented and packaged - and the publishing of content. The network used could be either the upgraded fixed network, the cable-TV network or satellites. Telia's Internet marketplace 'Passagen' and the electronic trade system 'Tradebase', are examples of such platforms. Telia wants to focus on content used in information, education and entertainment.

Telia needs to make alliances with several content companies to be able to offer a portfolio of new media services. A first step is taken by creating the Internet marketplace 'Passagen', where several media producers and other businesses provide visiting Internet subscribers with information and services. The licence agreement with Digital to offer AltaVista is another example.

According to InfoMedia, its key priority partners are local directory companies and local versions of Telia's Internet marketplace 'Passagen'.

However, we believe InfoMedia needs alliances with local media companies like Egmont in Denmark. A long-term necessity for Telia is a strong partnership with a larger media company, like Marieberg in Sweden, Helsinki Media in Finland, or maybe even an international media group.

5.2.2 The Internet

The Internet is the main driving force in the creation of the new telecom market. It will put enormous pressure on telecom tariffs and will pave the way for a multimedia consumer market.

It started as a research network in 1969, and was only opened to non-research users in 1987. The computers connected to the Internet may use different operating systems (DOS, Windows, Unix, Mac) but the adoption to the common Internet protocol known as TCP-IP enables them all to communicate with each other.

- **The short term benefits** for Telia will be an increase in call charges from individual access, together with increased demand for leased lines for both access and net use.

  All operators will make money on the Internet, as anybody accessing the net will need an operator line to do so, which means the operator receives line rental plus local call revenue. A heavy user may consider renting a line. To develop service based revenue, operators may enter joint ventures with service/database providers.

  Traffic within the net is free. Users pay a monthly charge for access, usually through a local service provider and pay local telephone call charges for usage anywhere in the world. It appears that traffic through the net will continue to be free as it is very hard to control.

- **The threat** to all traditional telecom operators like Telia is that the Internet creates a multimedia market, with competitors offering consumers attractive media services with low-priced phone calls as an extra bonus. This will put enormous pressure on the revenues of traditional telecom operators.

  The new (and old) players aiming to offer interactive mass market media services - such as entertainment, education, information and electronic commerce - will use all possible broadband access networks to reach the consumers: upgraded copper lines, cable-TV, terrestrial and satellite TV, high speed radio, fibre etc.

  As the network will be only part of the solution that future customers demand, the content offered in the package will be a vital requirement.

  Increasingly, the type of content and platform provided by the operators will attract subscribers. Telia's licence agreement with Digital to offer the popular Internet search engine AltaVista is one example.

- **The long term opportunity** for Telia is to become a telecom-based content provider, which is exactly the management's intention according to the new strategy '2001 Now'.

  The opportunities for the traditional telecom operators will be to bundle services and offer a powerful product brand.

5.2.3 Market description

Competing telecom operators, as well as Swedish media companies, have heavily criticised Telia's plan to provide both content and distribution. They want this combination to be banned by the new Swedish Telecom Act.

However, Telia is not alone in its ambition to migrate from 'carriage' to 'content'. Other telecom operators like BT, Deutsche Telekom, AT&T and MCI are all taking steps in this direction - to offer content to its subscribers in Sweden and elsewhere.

A law preventing Telia to offer content is not likely, however. Being the owner of Telia, the Swedish government has the right to restrict the management's intention to offer content to the subscribers. But the government can not stop Telia's competitors from doing the same in Sweden, as this is permitted by the EU regulation. We do not believe that the government wants to create unequal terms for competing operators in Sweden.

- Currently, BT is not allowed to provide entertainment services on a nation-wide scale in the UK, but that restriction is likely to change soon, according to Oftel, the UK telecommunication supervisor. BT already has an alliance with the Italian media company Berlusconi and the German Kirch Group. BT's new fully-owned company, MCI, owns part of Murdoch's NewsCorp.

- Deutsche Telekom is developing services in co-operation with Bertelsmann and Canal Plus.

- A recent more local example of this trend is the alliances between the major Norwegian media consortium Schipstedt and two of Telenordia's owners - Telenor and Tele Danmark. Although Telenordia currently strongly denies it has any intention to provide content to Swedish customers, we believe this is the most likely outcome.

- Netcom Systems (Tele2 and Comviq) has very close relationships with content provider MTG which owns TV channels, magazines and newspapers. They are all part of the Kinnevik business sphere.

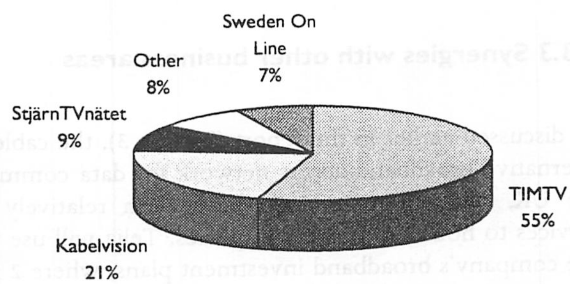
5.3 Telia InfoMedia Television

Telia's subsidiary, Telia InfoMedia Television (TIMTV) - formerly Svenska Kabel-TV - is Sweden's largest cable-TV operator. The company sells and distributes TV programmes and develops services in its own cable-TV network. The company's share of the Swedish cable-TV subscribers is approximately 55%. Total revenues in 1995 were SEK575m.

5.3.1 Market description

Following a rapid growth in 1989 and 1990, the Swedish cable-TV market has now matured. The penetration level is very high with around 60% of the Swedish households, or 2.3 million households connected to a cable-TV network. As the penetration is very high - especially in urban areas - while the housing construction industry is declining, we forecast very slow growth in cable-TV penetration rates.

Market shares, CATV
Subscribers



Source: Carnegie Research

TIMTV has around 55% of the Swedish cable-TV subscribers or close to 1.3 billion households connected.

Kabelvision is a subsidiary of listed Netcom Systems and StjärnTVnätet, a cable-TV network located in the Stockholm area, is owned by Singapore Telecom, but is presently for sale.

5.3.2 New cable-TV services

TIMTV has introduced several new cable-TV services based on interactivity during the last few years:

- In January 1996, TIMTV launched the pay-per-view service 'Bio Hemma', as the first cable-TV operator in the Nordic region.

- The information channel, Channel 9, broadcasts messages to customers backed up by the interactive teletext-TV, Plustext. Among other services offered in Plustext, are BoVision (for finding flats and houses), RF's Resultatbörs (listing the results of various sporting events), SkivShopen (for buying CDs) and BörsVision (for viewing share prices).

- In February 1995, TIMTV launched a comprehensive trial of Video-On-Demand (VOD) for 500 households in Stockholm. These tests advanced during 1996, with additional services and more connected households. The VOD-service is expected to be fully rolled out within a ten year period.

- TIMTV has developed a completely integrated digital technology system of local advertising insertion, Selective TV-Advertising, comprising 2.5 million people in Stockholm, Göteborg, Malmö and Uppsala.

- In 1996, TIMTV also introduced a new movie channel together with SVT (Sweden Television) named 'Guldkanalen'. 'Guldkanalen' broadcasts old movies from the 1930s, 40s and 50s.

The cable-TV networks were originally not designed for interactive services with traffic going in both directions. Upgrading investments therefore need to be done in order to prevent leakage and disruption.

When upgraded, the cable-TV networks will be able to offer 100-150 channels of 34Mbps each and a return channel of 2Mbps. Some operators even argue that they will be able to increase capacity to 45Mbps and a return channel of up to 30Mbps.

However, in order to get access to the new digitalised channels, households must buy a set-top-box, which will cost SEK1,000-5,000 per household.

5.3.3 Synergies with other business areas

As discussed earlier in the report (Section 3), the cable-TV network could be used as an alternative broadband access network for data communication and voice telephony. In the UK, cable-TV companies have been relatively successful in offering telephony services to households and companies. Telia will use the cable-TV network as a part of the company's broadband investment plans, where 2 million households will be offered broadband access in 1998.

5.4 Other InfoMedia businesses

The InfoMedia business area also includes the companies Telia InfoMedia Respons and Telia InfoMedia Reklam

5.4.1 Telia InfoMedia Respons

Telia InfoMedia Respons (formerly Telia Telerespons) offers information, support and marketing services. The sales in 1995 (including internal sales) were SEK982m.

Telia InfoMedia Respons' product portfolio comprises more than 20 services, such as marketing assistance, fax distribution, special telephone services for people with impaired sight or hearing and call centres. However, the dominant service is directory inquiries.

Competition in this kind of information services is fierce. The company faces competition from call centres, service bureaus and on-line companies.

5.4.2 Telia InfoMedia Reklam

Telia InfoMedia Reklam develops and markets information media both in printed and electronic formats. The core product are directories and more than 70% of revenues results from advertising. The 1995 revenues (including internal sales) were SEK2bn.

The strategy of selling advertising space in the directories is very successful, and Telia will try to copy this in other countries, as well as in the new electronic media environment.

Although the majority of InfoMedia Reklam's products continue to be printed, a shift in focus towards electronic distribution channels, such as interactive on-line services and CD-ROM products, can be expected. However, the majority of revenues will still come from advertising.

The most famous trademark of Telia InfoMedia Reklam is 'Gula Sidorna' (Yellow Pages), a market place which generates about SEK200bn in business transactions every year.

5.5 Revenue forecast

If InfoMedia is successful, the total Nordic revenues from new media services could increase from InfoMedia's SEK4bn (1996) to SEK8bn five years from now. Two-thirds of the added revenue will most likely be advertising-related and the remaining one-third a result of transactions and commissions. Most of the increase will come from the expansion into the other Nordic countries.

5.6 Capital expenditure in InfoMedia

To reach its ambitious target to increase total Nordic revenues for new services by SEK4bn, Telia needs to invest around SEK3bn over the next five years. The investment will partly be used to develop Telia's local directory business in the other Nordic countries and to develop local versions of Telia's Internet marketplace 'Passagen'.

We forecast that investments in existing InfoMedia business will remain at the historical level.

The upgrading of the cable-TV network will require investments of about SEK300-500 per household. The total investment for Telia should therefore be about SEK650m. However, since these investments are a part of Telia's broadband program, they are included in our forecast for the fixed network investments (Section 3.5).

6 International strategy

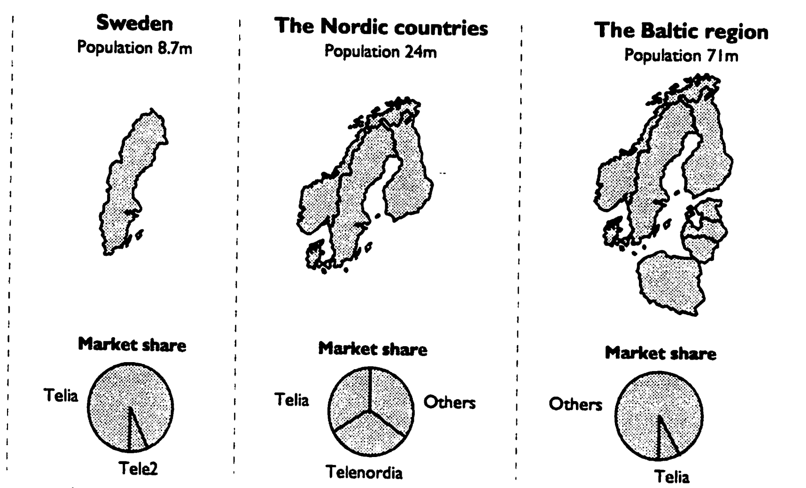
6.1 Background

There are three motives behind Telia's discussed international expansion: (i) Telia has extended the definition of its home market to comprise the other Nordic countries and the Baltic states in order to meet increased competition in Sweden; (ii) globalisation of the economy continues and Telia intends to service its multinational customers all over the world; and (iii) Telia aims to capitalise from its knowledge from a competitive market and its long experience of telecom projects in the third world.

	Market trends		Telia's strategic response
(i)	Shrinking market shares in Sweden	->	Expanded home market
(ii)	Globalisation of the economy	->	Unisource/Uniworld
(iii)	Investment opportunities in emerging markets	->	Telia Overseas

6.2 The Nordic countries and the Baltic region

With the expanded home market, Telia's targeted population has increased almost ten times. From acting as a dominant player on its domestic market, Telia now has to get used to being a smaller player with several equally strong and stronger competitors in its redefined home market.



Deregulation and increasing competition in each of the Nordic countries have made the telecom market more pan-Nordic. There are several reasons why Telia should become a pan-Nordic operator:

- Approximately 20% of total exports from Nordic countries are to another country in the Nordic region. With the increasing competition, efficient telecommunication all over Scandinavia becomes an important competitive edge.

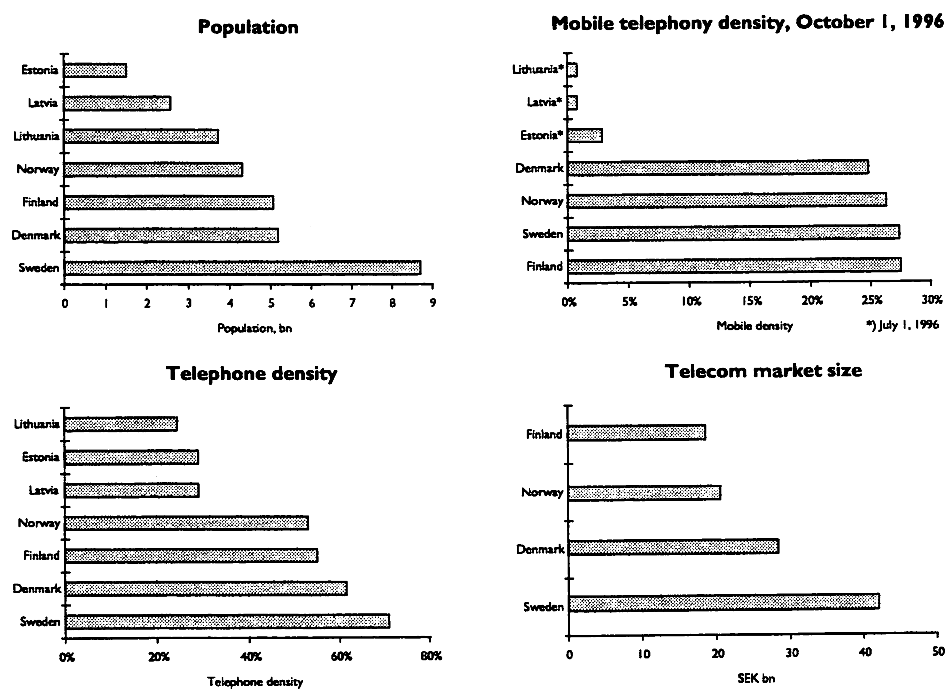
- Rapid technological development favours attack rather than defence. An attacker does not carry the historical baggage and old investments in infrastructure.

- Telia does not have to provide universal services in the other Nordic countries. Instead, the company can concentrate on profitable market segments, for example middle to large sized corporate customers.

- The Nordic expansion is also justified by a cost-saving argument. For example, equipment in Skåne may be used to support the Danish market. Telia can also capitalise from utilisation variations in different countries.

- As a DCS1800 operator, Telia has the chance to exploit the migration of the analogue customers in the NMT-monopolies in Finland, Norway and Denmark to digital mobile services.

All these factors indicate that Telia is well positioned to gain above-average return on investments in the other Nordic countries.



Source: Carnegie Research, FT Mobile Communications , Sweden Statistics

6.2.1 Finland

Market description

The last decade has seen a competitive duopoly emerge in the Finnish telecom market. The market structure is unique. On one side is the state-owned Telecom Finland and on the other the Finnet Group, consisting of 46 regional telephone companies. Over 2 million (72%) of the country's 2.8 million telephone main lines are connected to the networks of the regional telephone companies. Currently, subscribers can take a stake in their local operators by paying a higher connection fee, in return for which they get cheaper telephone calls instead of dividends. About 75% of the local telecom subscribers are also shareholders.

The opening of basic voice services in 1994 was accompanied by the licensing of a small third carrier. Telivo Oy, a subsidiary of the state-owned power utility Imatran Voima Oy (IVO), was given limited access to the trunk and international voice markets.

The mobile market is characterised by an analogue monopoly, Telecom Finland Mobile, and a GSM duopoly - Telecom Finland Mobile and the privately owned Radiolinja, partly owned by the Finnet Group. The government has also issued DCS1800 licences to Telecom Finland, Radiolinja and Telivo.

In October 1996, the Finnish government proposed a new Telecom Act, which it hopes will be passed by mid-1997. It is another step in the direction of abolishing the remaining regulatory barriers that obstruct the entry of new operators into the Finnish market. The proposal includes the replacement of the licence requirement by a notification requirement and a separate cost accounting requirement for network providers.

Nevertheless, these changes may not encourage new operators to enter the Finnish market. It may be too competitive and too small. Moreover, one issue that the government has chosen not to address in the new Act is the question of the ownership of the regional telephone companies by subscribers. These terms could discourage subscribers from changing to a competing operator.

The size of the Finnish telecom market

Market segment	Market size SEKbn	Telecom Finland's market share	Finnet's market share
Subscription and local calls	4.8	32%	68%
Long-distance calls	0.7	41%	53%
International calls	1.9	75%	19%
Mobile telephony	3.5	85%	15%
Data transmission	2.3	32%	38%
Other activity	5.4	31%	40%
Total	18.6	44%	43%

Source: The Finnet Group, The Finnish Ministry of Communication, Carnegie Research

Telia's strategy in Finland

Due to the different historical structure of the Finnish telecom market compared to the other Nordic countries, Telia has encountered several interesting acquisition targets in Finland.

In September 1996, Telia acquired 75% of the shares in Telivo. With this acquisition Telia is well positioned in the Finnish telecom market. Telivo, which so far has been a low-cost carrier focusing on business customers, has a 6-10% market share of the international traffic and 4-6% of the long-distance market.

Telia plans to broaden the product range of Telivo into a full-service operator. Initially, a DCS1800 network will be built, which will cover Finland's largest cities. The acquisition included a detailed investment plan for the mobile network, completed with a licence. The network should be ready at the latest in 1998. Telivo is negotiating with Telecom Finland and Radiolinja in order to lease capacity from their GSM-network outside the covered area. However, the system requires a new generation of dual-mode cellular hand-sets that work in different frequency areas.

At the end of October 1996, Telivo also received a licence to build fixed local networks in Finland.

At the beginning of November 1996, Telia acquired 80% of the telecom equipment chain Viesti-Tuote. The aim is to make the Viesti-Tuote group an even stronger service chain, which will operate on a franchise basis. Viesti-Tuote had net sales of FIM141m (SEK200m) in 1995 and 83 employees. Following this acquisition, Telia has more than 300 employees in Finland and its combined Finnish net revenues exceed FIM400m (SEK580m).

Revenue and capital expenditure forecast

The investment in the DCS1800-network will total around SEK1bn. Other investments in Finland will be relatively modest. The largest is the building of a sea cable between Sweden and Finland. We expect Telia's capital expenditure to amount to SEK1bn in 1997 and then level out at SEK300m, annually.

We expect the Finnish telecom market to grow by around 6.5% annually until 2001, when we expect Telia to have close to 10% share of the total Finnish telecom market. This corresponds to a revenue in Finland of SEK2.4bn in 2001.

6.2.2 Denmark

Market description

From 1 July 1996, the Danish telecom market became fully liberalised in line with the legislation that was passed in April 1996, 18 months ahead of the original timetable. The Telecom Act introduced full competition in the provision of voice services and in telephone infrastructure. It also allowed new entrants to provide international calls and permitted the construction of cross-border infrastructure. The Act also introduced competition in broadcasting, allowing all operators to supply radio and television services via cable and satellite. The second phase of the legislation is to be implemented in early 1997, establishing the legal framework of interconnection agreements.

The mobile market is characterised by an analogue monopoly - Tele Danmark Mobil - and a GSM duopoly, Tele Danmark Mobil and Sonofon; the latter is owned by GN Great Nordic and Bellsouth. However, the Danish government will issue at least three DCS1800 licences in April 1997.

Before the liberalisation of the Danish telecom market, two companies tried to gain permission to become a second national operator - Telia and GN Great Nordic. However, now that full competition has been introduced, GN has restricted its activities to its GSM subsidiary, Sonofon. Another interested party is the Danish National Railway Company, DSB. It has expressed a desire to find a telecom partner and has spare capacity to market on its national telecom network.

Besides Telia, there are mainly two foreign telecom operators that are interested in the Danish market, Global One and Netcom Systems of Sweden (former Tele3). Global One already provides value-added services and Netcom/Tele3 entered the market's first interconnection agreement with Tele Danmark in June 1996. Competition will primarily be based on interconnection and reselling of existing capacity.

The size of the Danish telecom market

Market segment	Market size SEKbn	Tele Danmark market share
Fixed voice telephony	12.3	99%
Mobile telephony	4.6	60%
Equipment	5.7	60%
Leased lines and datacom	1.5	100%
CATV	1.1	50%
Yellow pages/directories	1.4	50%
Operator services etc.	0.7	95%
Other	1.1	70%
Total	28.4	80%

Source: Carnegie Research

Telia's strategy in Denmark

Telia has been active on the Danish market since 1995. The company has so far mainly provided value-added services. With the liberalisation of the Danish market, Telia began offering international services on 20 November 1996. The offer promised up to 35% off standard rates. Telia is seeking a 20-30% market share in the long term. Any services for private consumers will not be introduced before 1 March 1997.

In 1995, Telia bought 94% of the second largest cable-TV operator in Denmark, Stofa. Stofa's CATV-network covers about 170,000 households and constitutes an extensive customer base for voice telephony and Internet connections. Telia has also expressed its intentions to use the network for telephony.

In September 1996, Telia had 400 corporate customers in Denmark. Of these, approximately 160 were large companies.

Revenue and capital expenditure forecast

Telia's investments in Denmark totalled SEK800m in 1995. In the next 2-3 years Telia plans to invest SEK1.0-1.5bn in a DCS1800 network. We expect Telia's capital expenditure in Denmark to be SEK1bn in 1997, following the investments in the DCS1800 network. Capital expenditure is then expected to level out at SEK300m per year.

We expect the Danish market to grow by about 5% per annum until 2001, when Telia is expected to have gained a 8.5% share of the total Danish telecom market. This corresponds to revenues of around SEK3bn in 2001.

6.2.3 Norway

Market description

In May 1996, Norway decided to follow the EU deregulation timetable and liberalise its telecom market in 1998. Until then, Telenor, the state-owned national operator, will continue to enjoy a total monopoly on fixed voice telephony and infrastructure. Cable television has already been liberalised, along with data communication to closed user groups. In the cellular sector, Telenor's mobile arm, Telenor Mobil, faces competition from the listed GSM operator Netcom ASA. Paging is also open to competition.

In 1995, two 'experimental' 3-year DCS1800 licences were awarded to Telenor Mobil and Netcom. Telia applied for one, but was turned down. It is now likely that a third licence will be awarded in 1998, at which time the licences granted to the GSM duopoly will be made permanent.

The success of the third DCS1800 operator will partly depend on the roaming agreements with the GSM-operators. Currently, the GSM operators do not have to provide roaming to other mobile operators.

The size of the Norwegian telecom market

Market segment	Market size SEKbn	Telenor market share
Domestic fixed telephony	6.3	100%
International fixed telephony	3.4	98%
Mobile	3.5	80%
Equipment	2.3	75%
Other	5.1	80%
Total	20.6	87%

Source: Carnegie Research

Telia's strategy in Norway

Following the late liberalisation planned in Norway compared to the other Scandinavian countries, Telia has to wait until 1998 before it can establish as a full-service operator. However, there is an early opening in the form of the DCS1800 licence. Even though Telenor and Netcom ASA already have had DCS1800 licences for two years, they have been forced to wait for the arrival of affordable dual-mode hand sets before implementing the service commercially. Therefore Telia still has a fair possibility of success in the Norwegian cellular market.

Telia also plans to offer nation-wide computer network services for local customers in Norway, together with Cinet, one of the leading Norwegian computer companies.

Revenue and capital expenditure forecast

If Telia secures a DCS1800 licence, it will mean investments of SEK1.0-1.5bn. We estimate Telia's possibilities of gaining a significant share of the Norwegian mobile market to be fairly high, mainly due to the fact that there are only two competitors today. We expect the investments in Norway to peak at SEK1bn in 1998 and then level out at SEK300m.

We believe the Norwegian telecom market will grow by about 5% annually until 2001, when we anticipate Telia's share of the total market to be about 6%, corresponding to revenues of SEK1.9bn in 2001.

6.2.4 The Baltic states

Not many western telecom companies have countries bordering their domestic market which are and will continue to experience significant economic growth during the next years. However, the countries surrounding the Baltic Sea, including the Baltic States, Poland and Russia, represent a very high growth potential for Telia. Even if Russia is excluded, this region comprises close to 50 million people with a current telephone penetration of only 17%. We will describe the three Baltic states in more detail.

The number of main lines installed in Estonia, Latvia and Lithuania, are expected to increase from 2.1 million in 1996 to 2.8 million by the end of 2000. This expansion is estimated to require a total investment of USD2.4bn (SEK16bn) or USD392m (SEK2.6bn) per annum. Much of this is likely to come from Nordic and US investors already active in the region;

- In 1992, Telecom Finland an Telia together acquired a 49% stake in Estonian national operator Eesti Telefon.
- In January 1994, a consortium with Cable & Wireless and Telecom Finland, acquired a 49% stake in Latvian national operator Lattelekom.
- Telia is also involved in analogue cellular networks in Estonia and in digital cellular networks in each of the Baltic states. Furthermore, Telia has established an international gateway in Latvia and owns one of the four Latvian paging operators.
- Telecom Finland has concentrated on Estonia and Latvia and entered all sectors of the telecom market in those countries.
- Tele Danmark is involved in a consortium with Great Northern Telegraph which has invested in laying an optical fibre cable under the Baltic Sea from St Petersburg to Copenhagen.
- Telenor has entered the joint venture between Telia and Lietuvos Telekomas, the national operator in Lithuania, which operates a GSM network in Lithuania.

As shown above, Telia and Telecom Finland are the two most active foreign operators in the region. However, there are still some interesting investment opportunities. For example, the Lithuanian government is expected to follow the example of Estonia and Latvia and sell a stake in the state-owned operator Lietuvas Telekomas to a strategic partner. Also, Estonia and Latvia are expected to licence new fixed operators to compete with the semi-state-owned monopolies.

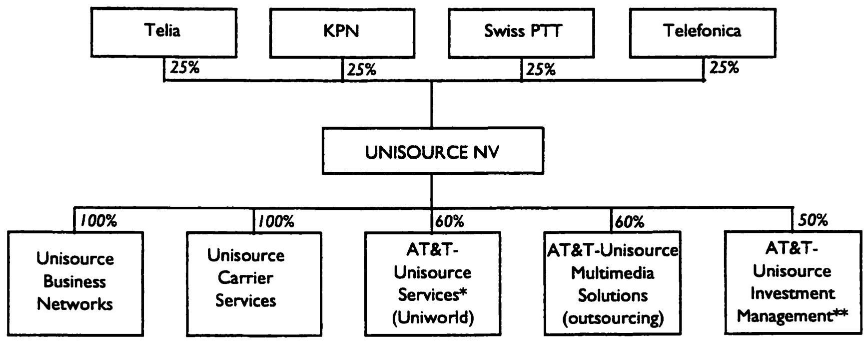
6.3 Unisource/Uniworld

6.3.1 Background

In the summer of 1992, Telia and PTT Telecom of the Netherlands (KPN) established a joint-venture, Unisource, with the ambition of becoming a leading operator in Europe. In 1993, Swiss PTT joined the company as did Telefonica of Spain in 1996. In late 1994, Unisource took another step by creating Uniworld together with AT&T, aimed at high-end business customers.

Telia's ownership stake in Unisource NV, the Dutch holding company, has gradually declined from 50% in 1992 to 25% in 1996.

At the time of its creation, expectations were high concerning Unisource/Uniworld's future growth possibilities. However, the rapid changes in the telecommunication environment have clearly lowered these prospects and the group is currently of secondary interest when forecasting the future of Telia, although not unimportant.



*) Incl. mobile, satellite
**) Management of shareholding in operations in major markets in Europe

Of the originally six separate Unisource entities, only two have reached a substantial size, Unisource Business Networks and Unisource Carrier Services.

6.3.2 Unisource Business Networks (UBN)

Four years after Unisource was set up, its Business Networks division is still the group's core business, accounting for 80% of total revenues. UBN consists of the national datacom operators of the Unisource partners. Backed by voice generated revenue, UBN is very profitable with strong cash-flows.

6.3.3 Unisource Carrier Services (UCS)

UCS was originally set up as a management company. Its function is to co-ordinate the Unisource partners' international networks in order to achieve economies of scale. Its tasks include network planning, co-ordinated billing as well as procuring external capacity. As of next year, UCS will become more of an operative unit, offering carrier services to external operators.

6.3.4 Uniworld

The AT&T joint venture has been very unprofitable since its inception. The main reason has been the devastating impact of the Internet and the asymmetric revenue/cost situation. While Uniworld's revenues already relate to an unregulated future, its costs are still based on the old monopoly situation. The effect is that the company has to sell its services, international voice and datacom traffic, at prices below cost.

This situation will largely correct itself when the market is deregulated in 1998, which will bring down costs. Telia believes Uniworld will break even in 1999.

6.3.5 New markets

As all the Unisource/Uniworld partners are loosing ground on their respective domestic markets, the group has targeted four markets in which it will try to make inroads: the UK, France, Germany and Italy. The ambition is naturally that growth should offset the unavoidable loss of market shares in the home markets.

Typically, the group plans to enter a new market by establishing a holding company, jointly owned by local interests and one or more of the partners directly. Other owners will be invited to join when the holding company is listed.

This way, Unisource has only a limited risk in the project and the option of selling its holding at any stage. The strategy resembles that of Telia Overseas, which, for some time, has pursued a very successful, opportunity-driven approach to investments outside its natural habitat.

6.3.6 One telecom country

The potential in Unisource/Uniworld lies in its ability to develop a strong supply of network services. If the group can implement such a service concept throughout its region, the 'One Telecom Country' can be materialised.

If successful in streamlining services, billing and hardware purchasing, the group and its partners can make quite substantial gains. An example is the procurement of transmission equipment where Telia says it can see significantly lower prices.

6.3.7 Competitive situation

The competitive situation has sharpened since Unisource was founded. Concert, an alliance formed by BT and MCI in 1993 has changed insofar, as BT has acquired the whole of MCI. In 1996, Global One was founded by Deutsche Telekom, France Telecom and Sprint. Defined in terms of the aggregate size of the partners, Uniworld is on a par with Global One, while Concert is significantly smaller.

Uniworld	USDbn	Global One	USDbn	Concert	USDbn
AT&T*	51	Deutsche Telekom	48	BT	23
Telefonica	15	France Telecom	31	MCI	15
Swiss Telecom	9	Sprint	13		
KPN**	8				
Telia	6				
Total turnover	89	Total turnover	92	Total turnover	38

**) Excl Lucent*
***) Excl. Post-Office activities*

6.3.8 Unisource as an investment for Telia

Telia has so far invested SEK1.25bn in Unisource/Uniworld in the form of assets and cash injections. The company now says that it will invest no more than SEK1bn annually in the group up until 2000, including cover of losses. That corresponds to about 7% of Telia's annual investment budget.

6.4 Telia Overseas

During the spring of 1996, Telia formed a new company, Telia Overseas, together with three Nordic financial investors, Skandia, Ratos and Orkla. The purpose is to take advantage of opportunities in the radically changing global telecommunication markets and capitalise on Telia's reputation and knowledge of telecommunication projects in the developing world. The business idea is to identify, evaluate and execute investments in telecommunication-related operations, mainly cellular with a short pay-off time, in fast-growing markets outside Europe. By providing financial and operational resources, Telia Overseas will generate a high return on capital invested. Telia is the majority owner holding 65% of the company.

Investments in telecommunication infrastructure in the third world have increased rapidly during the last years. A driving force has been the understanding of how inferior telecommunication slows down industrial and social developments. The rapid technical development has made it possible to build efficient telecom networks with high capacity and coverage. Several developing countries have invited private investors to be shareholders in their state-owned carriers, or created opportunities for foreign telecom operators to set up operations in their countries. Since the 1960s, Telia has, through the Swedtel subsidiary, been acting as a consultant in several countries in Africa, Asia, Latin America and Eastern Europe. As a result, Telia is frequently invited to participate in telecommunication projects.

Telia Overseas estimates that it will invest about SEK1bn annually in the years ahead. The shareholders guarantee a total equity of about SEK2bn.

The motive behind Telia Overseas is purely financial, and the other shareholders will guarantee the financial review and management of the investment projects. The return from Telia Overseas is being used to finance Telia's Nordic expansion and other investments in the domestic market. However, even though the Overseas investment does not require a substantial attention from Telia's top management, it will require middle-management resources, which is in short supply in Telia.

6.5 Other international investments

Telia has also shown interest in major telecommunication equity investments outside the Nordic and Baltic areas and outside the Unisource commitment and the Overseas project. For example, it has participated in the tender for a stake in South Africa's state-owned operator, Telkom SA, but has recently withdrawn from the process. The purpose is to capitalise on Telia's unique competitive and rationalisation experiences.

During 1996, Telia has made two major investments:

6.5.1 Netia Telekom

In June 1996, Telia joined a consortium of international and local companies to form Netia Telekom, a fixed-line operator which aims at becoming the second operator in Poland after the state monopoly Telekomunikacja Polska (TPSA). Telia replaced the US group Sprint International in the consortium and now holds 25% of the shares. The other shareholders are the European Bank for Reconstruction and Development (EBRD) with a 10% stake and RP Telekom which controls the remaining 65%. Poland is one of the least developed telecom markets in Europe, with only five million subscriber lines and 39 million inhabitants. Netia will invest about USD350m in order to install 350,000 telephone lines within three years.

We believe that the investment in Netia should be seen as part of Telia's focus on the Baltic region and as such, a suitable investment to defend Telia's future position in the region.

6.5.2 Telecom Eireann

Together with KPN of the Netherlands, Telia has also won a tender for a strategic equity stake in the Irish state-owned telecommunications monopoly, Telecom Eireann, in competition with Tele Danmark and US Bell Atlantic. The deal involves a cash payment of IEP183m (SEK2.1bn) for 20% of Telecom and an option to buy a further 15% at a price of IEP200m (SEK2.3bn). There is a possibility of a higher price if certain financial targets are exceeded. However, the deal will only close on the condition that Telecom gains dispensation from the 1998 EU liberalisation measures, at least until 2000.

We believe, that the rationale behind the Telecom Eireann investment is the same as that behind Telia Overseas. The investment could generate a considerable cash flow, especially since Ireland will remain a monopoly market for several years. This could be used to finance Telia's Nordic expansion. However, as with Overseas, it requires substantial management resources, which Telia probably is even more short of than capital.

7 International comparison

Telia's telecommunication operator peer group consists of its main competitors in the Nordic region and the shareholders of Unisource.

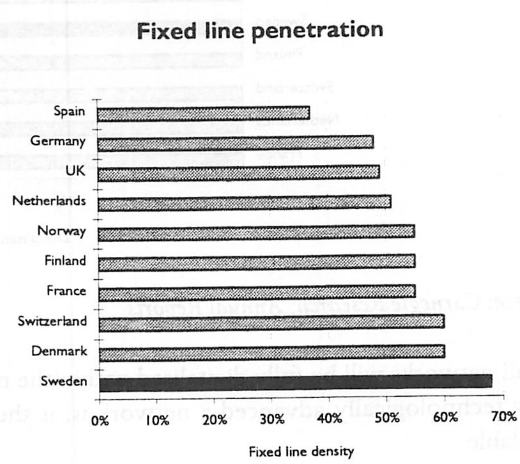
	Revenues 1995	Ownership
Competitors		
Deutsche Telekom	SEK290bn	83% state-owned
France Telecom	SEK195bn	100% state-owned
British Telecom*	SEK153bn	100% privately owned
Tele Danmark	SEK22bn	51% state-owned
Telenor	SEK20bn	100% state-owned
Telekom Finland	SEK8bn	100% state-owned
Unisource		
KPN	SEK77bn	45% state-owned
Telefonica	SEK69bn	20% state-owned
Swiss PTT	SEK77bn	100% state-owned
Telia	SEK41bn	100% state-owned

*) Incl. MCI: SEK255bn

Source: Carnegie Research, Annual Reports

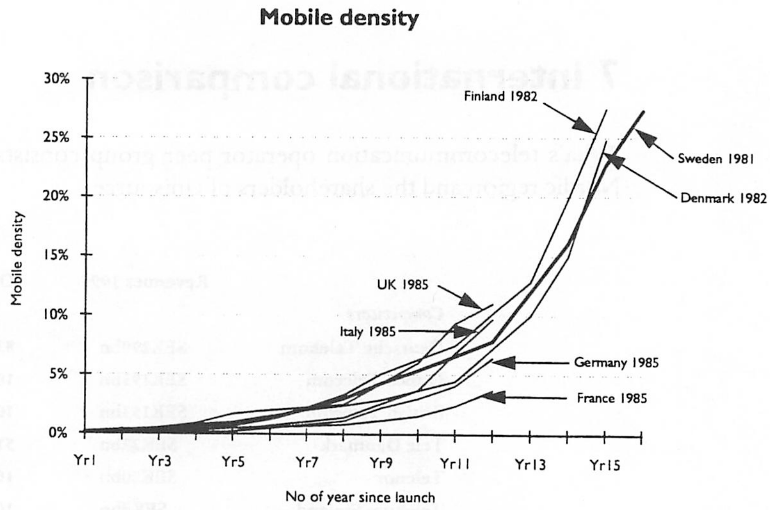
7.1 Market development

At close to 70%, Sweden has one of the world's highest penetration rates in fixed line telephony. During the past ten years, annual growth has been about 10%-points. In 1985, the penetration rate was just above 60%. The companies in the peer group have significantly lower penetration rates in their respective home markets.



Source: EITO 96

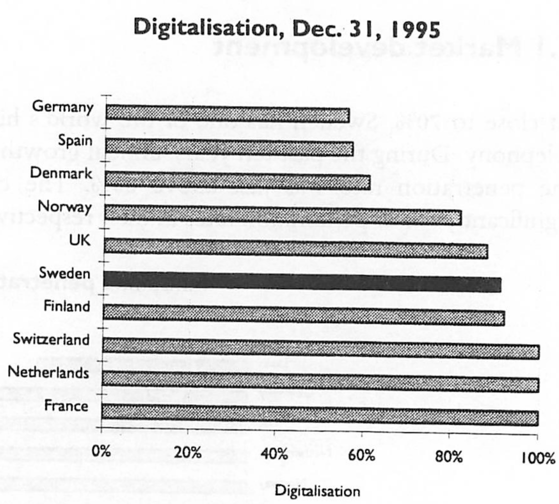
In addition to the high penetration rate for fixed line telephony, Sweden and the other Scandinavian countries also have the highest mobile telephony density in the world.



Source: FT Mobile Communications, Carnegie Research

The Swedish market has been and continues to be one of the most liberalised telecom markets in the world. During 1996, several EU markets opened up for competition on alternative telecom infrastructures (i.e. Germany and France) or all segments of the market (Denmark). According to the EU liberalisation timetable, most EU members shall deregulate their telecom markets on 1 January, 1998.

The digitalisation of the fixed line network is almost completed. Those operators in the peer group which do not have a completely digitalised network, including Telia, are expected to complete digitalisation in 1997 or 1998.



Source: Carnegie Research, Annual Reports

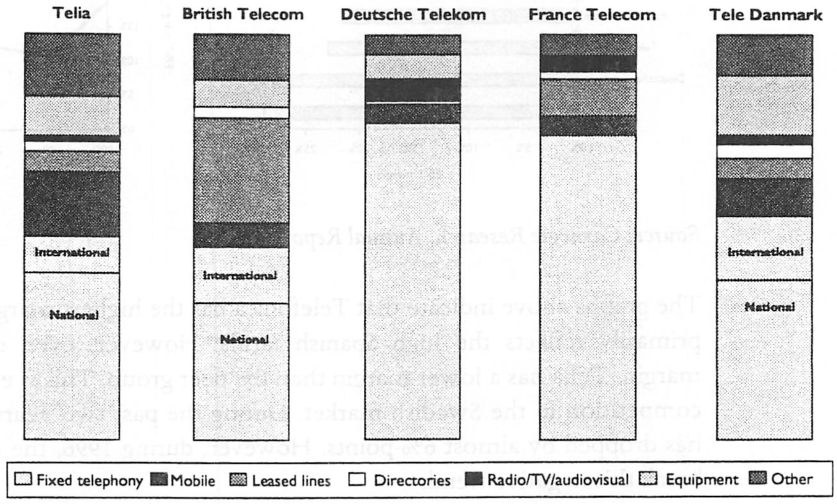
As all networks will be fully digitalised within the near future a more relevant measure of how technologically advanced a network is, is the extent to which broadband access is available.

7.2 Financial key ratios

From time to time analysts use alternative, 'telecom specific', key ratios, such as revenue per subscriber line, when analysing telecom operators. However, these measures often result in a skewed picture of the company when comparisons are made to other operators. The revenue of an operator may originate from different businesses, in addition to the fixed line network revenues, such as cable-TV and mobile telephony.

Distribution of revenues 1995

Share of total revenue



Source: Carnegie Research, Annual Reports

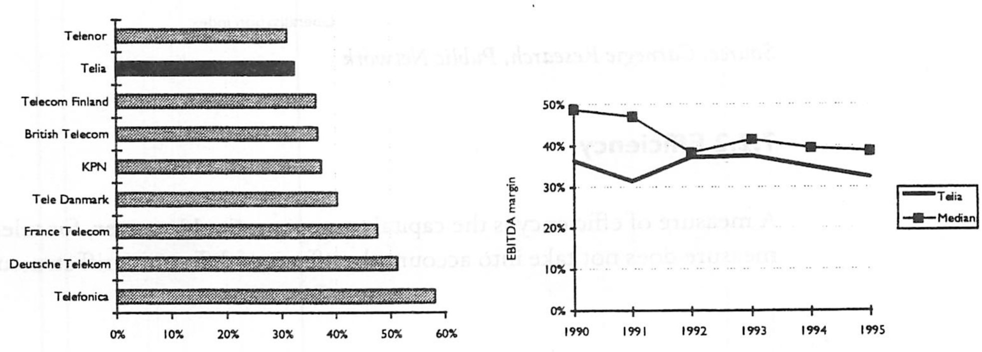
As shown above, a relatively large share of total revenues for Deutsche Telekom and France Telecom originate from basic telephony services. This could be explained by the fact that they have been operating in protected environments, with little incentive to diversify into new business areas. Furthermore, the market for leased lines is relatively smaller in monopoly markets for natural reasons.

As a result of the high mobile density in the Scandinavian countries, Telia and Tele Danmark have a larger share of mobile revenues in their total revenues figures than their international peers.

7.2.1 Margins

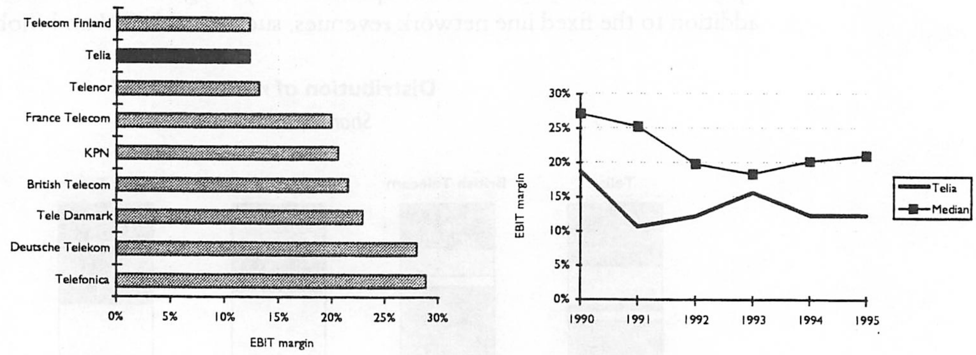
Also, the comparison of margins of different telecom operators requires great care. In addition to the operational structure, the margin is affected by the tariff structure and local market conditions such as geography or demography.

EBITDA margin



Source: Carnegie Research, Annual Reports

EBIT margin

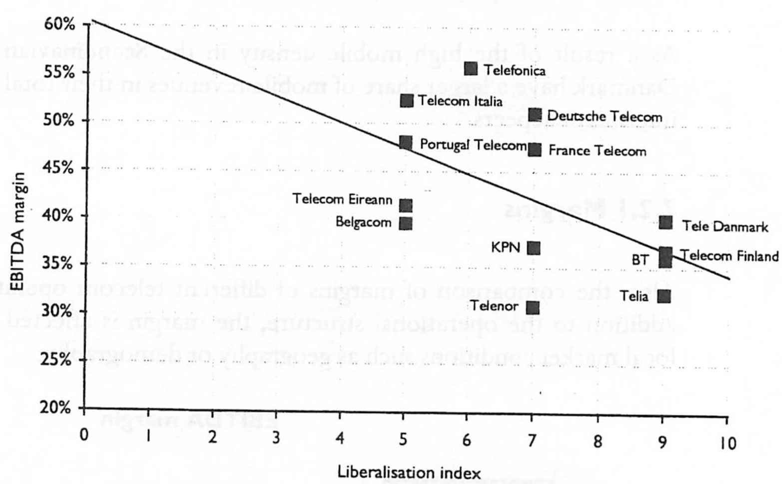


Source: Carnegie Research, Annual Reports

The graphs above indicate that Telefonica has the highest margin in the peer group. This primarily reflects the high Spanish tariffs. However, even compared to the median margin, Telia has a lower margin than the peer group. This is explained by the increasing competition in the Swedish market. During the past two years, Telia's EBITDA margin has dropped by almost 6%-points. However, during 1996, the company has managed to break this negative trend.

It can be showed, that telecom operators such as. BT, Telia and Telecom Finland, which have operated in competitive domestic markets for several years, have a considerably lower gross margin than operators with a protected home market including Telefonica and Portugal Telecom.

Liberalisation vs EBITDA margin 1995

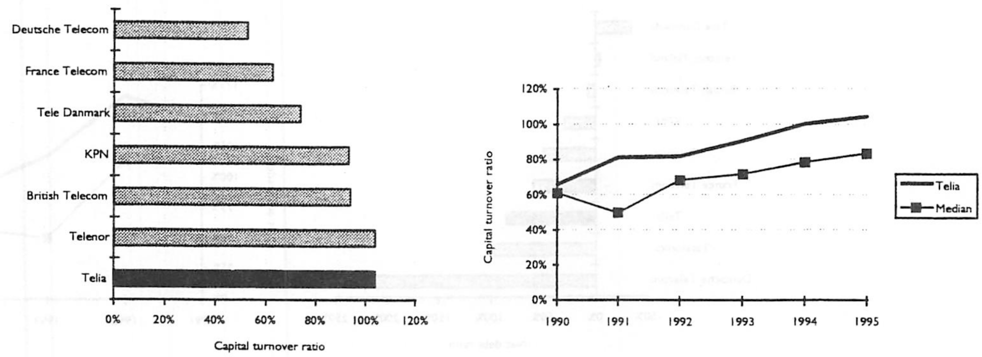


Source: Carnegie Research, Public Network

7.2.2 Efficiency

A measure of efficiency is the capital turnover ratio. However, for telecom operators, this measure does not take into account the effects of different tariff structures.

Capital turnover ratio



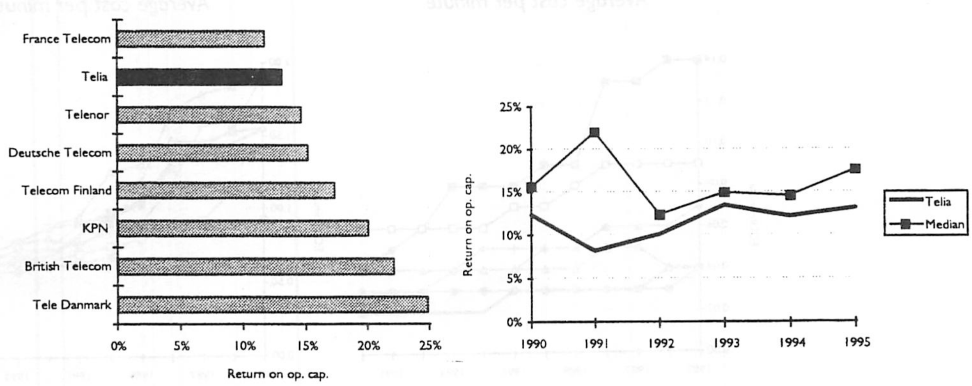
Source: Carnegie Research, Annual Reports

Comparing Telia with the peer group indicates that Telia is - and for several years has been - one of the most capital efficient operators in the peer group. This is partly explained by Telia's operational structure. Operations such as Telia Finans, Telia InfoMedia and Telia Mobitel are all non-capital intensive businesses.

7.2.3 Profitability

Although Telia's margins have dropped due to increased competition, the company has succeeded in keeping the profitability. As showed below, the return on operating capital even increased between 1994 and 1995, and it has continued to do so during 1996.

Return on operating capital



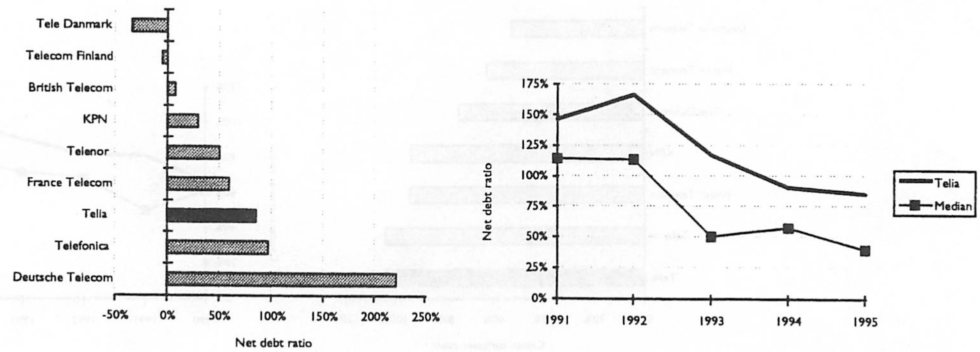
Source: Carnegie Research, Annual Reports

7.2.4 Capital structure

Despite the fact that Telia's historically strong cash flow has improved the net debt ratio considerably, is it still significantly higher than the net debt ratio of the companies in the peer group. All of Telia's main competitors, with the exception of Deutsche Telekom, have a stronger balance sheet than Telia. This is despite the fact that Telia for a number of years has had a higher operating risk, which should be compensated by a low financial risk.

As listed companies, Telia's competitors may find it easier to obtain new capital from the market when needed. They have also the possibility of issuing new shares as payment when acquiring companies.

Net debt ratio



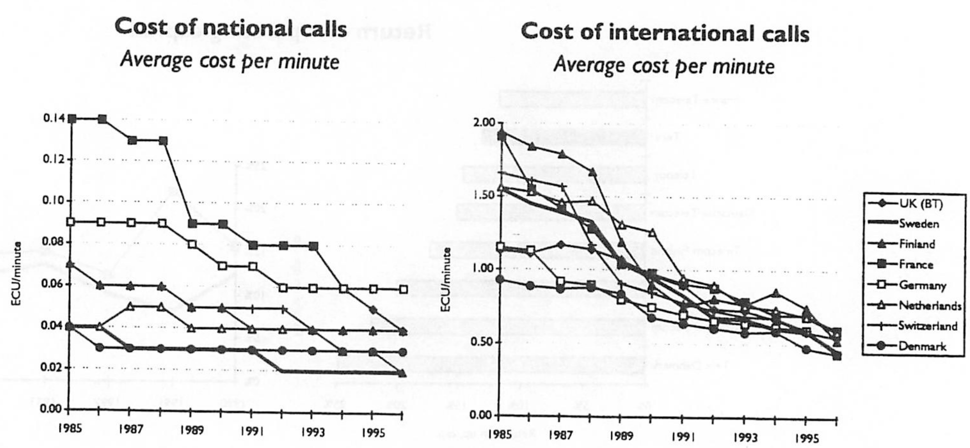
Note: The Deutsche Telekom net debt ratio has been adjusted for the new share issue connected to the privatisation in November, 1996

Source: Carnegie Research, Annual Reports

7.3 Tariff comparison

The cost of international calls has come down from almost ECU2 to ECU0.5 in ten years due to the technological development of optical fibre and increased global competition. Investments in international optical fibre cables have boosted capacity tremendously and, as a result, have made capacity almost a free resource.

Residential subscriber

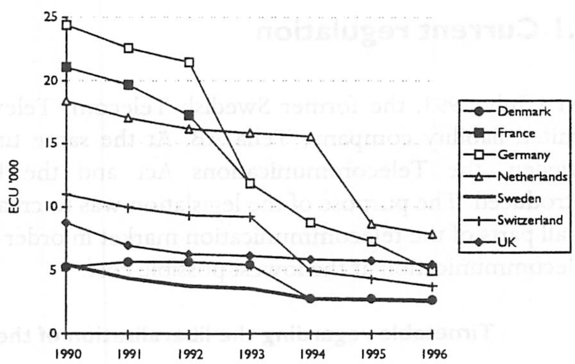


Source: Analysys

The price for leased circuits has varied considerably between different countries, and it is clear that countries with a deregulated market, such as UK and Sweden, have had the lowest prices.

Leased circuits

64 Kbps, 30 km national

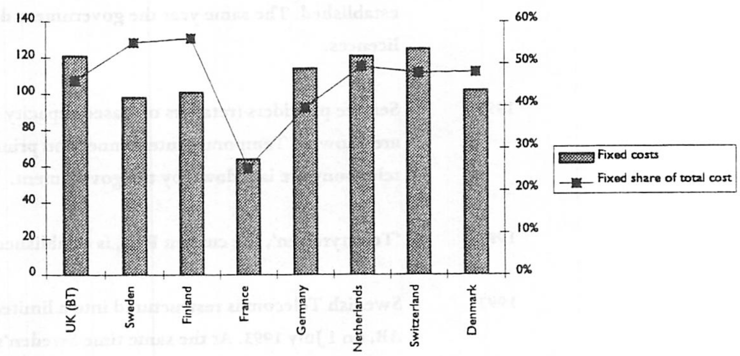


Source; Analysys

Telia has a relative high proportion of total telephony charges in fixed charges. However, the reason for this are the low overall tariffs. In the peer group, only France has lower fixed charges per line and per year than Telia in absolute terms.

Fixed charges, Residential customer

Average cost per line



Source: Analysys

8 Regulation

8.1 Current regulation

On 1 July 1993, the former Swedish Telecom, Televerket, was restructured to form a limited liability company, Telia AB. At the same time, the first telecom legislation in Sweden, the Telecommunications Act and the Radio Communications Act, was introduced. The purpose of the legislation was to create and sustain efficient competition in all parts of the telecommunication market in order to provide the users with accessible telecommunication at the lowest possible cost.

Timetable regarding the liberalisation of the Swedish telecom market

1980	**Gradually, it is permitted to connect private modems to the public network. Comviq is allowed to operate a nation-wide mobile telephony network.**
1985	**The telephone market is liberalised.**
1988	**The gradual liberalisation of the PABX market begins.**
1989	**An independent telecom authority, 'Statens Telenämnd', is established. The same year the government decides to issue three GSM licences.**
1991	**Service providers (retailers of leased capacity in the public networks) are allowed. Temporary interconnection principles regarding mobile telephony are laid down by the government.**
1992	**'Telestyrelsen', the current PTS, is established.**
1993	**Swedish Telecom is restructured into a limited liability company, Telia AB, on 1 July 1993. At the same time Sweden's first Telecommunications Act is introduced.**

The current regulation can be divided into four main areas: (i) the role of the PTS, (ii) licence approval, (iii) interconnection and (iv) the agreement between Telia and the State.

8.1.1 The National Post and Telecom Agency

The National Post and Telecom Agency (PTS) - the independent supervisory authority of both Acts - monitors the long-term directions of the Ministry of Transport and Communication. The PTS (i) handles the licensing procedure, (ii) implements the rules and instructions without interference from the Ministry and (iii) monitors compliance with the Telecom Act.

The purpose of PTS is to separate the role of the owner of Telia - the State - from its role as the regulating authority.

8.1.2 Licence approval

Three categories of telecom services require licences, provided that the operations are of significant size and that the services are supplied in a publicly available network: (i) the supply of voice telephony services, (ii) mobile telephony services and (iii) leased circuits.

According to the legislation, permission to conduct telecom operations must be given to 'applicants who can conduct sustainable operations, and offer high capacity and quality service'. There are certain restrictions for mobile services due to limited band frequency.

8.1.3 Interconnection fees

The legislation also covers interconnection fees. A licence holder is obliged to offer interconnection traffic to other licence holders, but is entitled to compensation. Compensation should be fair and reasonable and relate to the expenses for interconnection traffic.

Licence holders should come to an agreement regarding interconnection traffic without the intervention of the PTS. However, if the parties can not agree, the PTS will mediate. Therefore the PTS does not have a mandate to set interconnection fees or any other terms between the parties.

Telia charges interconnection fees for three different services: access, termination and transition.

The interconnection regulation is considered to be the single most important factor in the regulation of the telecom market.

8.1.4 The agreement between Telia and the State

In connection with the restructuring of Swedish Telecom/Telia, Telia and the State agreed on certain conditions Telia had to meet between 1 July 1993 and 31 December 1996. The agreement includes clauses to protect consumers and to promote competition.

Worth mentioning of the consumer protective clauses are:

- Price cap - the change in tariffs for telecom services in the fixed line network must not exceed the annual change of the net price index less 1%-point.
- A special tariff package for low users.
- The provision of unprofitable pay phones in sparsely populated areas.

The most significant of the competition clauses stipulates that Telia, when agreeing interconnection fees, is not allowed to compensate for any deficits that may occur as a result of the obligation to supply telephony services to anyone who demands it and at standard tariffs.

8.2 The EU regulation

Deregulation in the EU must be completed by 1 January 1998. The basis for deregulation is the ONP Directive (Open Network Provision). The intention is to secure access to the infrastructure in the telecommunication sector. The most important issues are:

- The State's role as the owner of an operator must be separated from its role as a regulating authority.

- Permission to provide telecom infrastructure must be open, non-discriminatory and transparent. However, the dominant operator may have to meet certain obligations.

- Operators that provide public telecom networks or public telecom services, and have considerable influence on the market, must offer interconnection traffic to other operators at cost-based fees.

- The dominant operator must offer some pre-defined basic services, the USO (Universal Service Obligation). Today, the USO includes fixed voice telephony and connections that allow fax and low speed modems. These may be broadened to include Internet, cellular telephony and broadband access.

- The cost of universal services must be financed either through a national fund, where new operators finance the dominant operator's universal service obligations through cash payments or an extra charge on the dominant operator's interconnection fees.

8.2.1 Differences between the EU and the current Swedish regulation

The most significant differences between the EU and the Swedish regulation are:

- The EU regulation only covers the providers of public telecom networks, while the Swedish regulation covers both the providers of network and telecom services.

- The responsibility for and the financing of universal services are regulated in the agreement between Telia and the Swedish state. The EU legislation promotes that USO's should be financed through national funds.

- According to the EU legislation, national regulating authorities should have the right to specify interconnection terms, following mediation.

- The EU interconnection regulation will probably require specific cost accounting.

It is important to note that Sweden never had a formal statutory telecom monopoly. Therefore it was relatively easy when the Swedish telecom market was liberalised. In other EU countries, the telecommunication sector has operated as part of the mail service monopoly and very extensive legislation. This also implies that in some countries, for example Germany, the PTT subsidised unprofitable Post Office operations.

It is therefore not totally correct to talk about the deregulation of the Swedish telecommunication market. Regulation has even increased in order to create the necessary conditions for competition in the market.

Licence holders in Sweden pay fees that correspond to the administrative costs of the licence. In other countries, the licence fees may be considerably higher. In Spain, Italy and Belgium, for example, there have been auctions where the highest bidders get the licence. These are welcome contributions to the State coffers in these countries. In the US, the tender offers have been conducted on frequency ranges. Therefore, the mobile services in the US have been relatively expensive and growth has been slow.

8.3 Future regulation

In February 1997, a proposal for a new Telecommunication Act will be presented to Parliament. The new legislation will be implemented on July 1, 1997.

The need for a new Telecommunication Act is highlighted by several factors. For example, the market situation was different in 1993; the technical evolution has been significant; the telecom market is becoming global; and there is a need to adapt to the EU regulation.

8.3.1 Experiences from the present regulation

The Ministry of Transport and Communication has listed the following experiences from the present regulation:

- Competition in the mobile and international sector has developed.
- New services and lower prices have been introduced.
- A greater integration of voice, video and data has developed.
- Negotiations between Telia and its counterparts have been lengthy.
- The PTS has a weak mandate regarding interconnection regulation.
- Telia has experienced healthy competitive pressure.

Several authorities have investigated the regulation of the telecom market. The following criticism has been raised against the current legislation:

- The USO is obsolete. New technology has made it less expensive to provide telecommunication services in sparsely populated areas. It can also be argued that, so far, monopolies have not offered 100% coverage; for example, in Portugal or Greece.
- In an official report ('Next step in Telecom Politics') from the Ministry of Finance, a separation of the access network from Telia was recommended. This was considered to be crucial for the interconnection regime to work. The need for vertical separation has also been argued by Telia's competitors in Sweden and the Swedish Competition Authority.
- The National Audit Bureau ('RRV') argues that since the PTS can not force the parties to come to an interconnection agreement, Telia, as the dominant operator, can delay the agreements.
- The National Audit Bureau also argues that Telia obtains an improper insight into competitors operations and their potential customers when they ask Telia for a leased line offer.

8.3.2 Ministry of Transport and Communication Green Book

In June 1996 a proposal for a new Telecommunication Act was suggested in a Ministry of Transport and Communication Green Book.

The most important issues discussed were:

- Universal services, including voice, transmission of fax messages, and communication via low-speed modems, should be offered at affordable prices. Separate funding of USO is not of immediate importance. However, if the competitive situation changes or if more services are included in the definition, this may be an issue in the future.

- The PTS will have extended powers regarding interconnection regulation and a new role as a sector agency.

- The dominant operators will be subject to stricter regulation, including requirements on accounting separation.

- The current licensing model is being replaced by a combined system with notification obligation and licence requirements when justified (frequency requirements, dominant position, etc.).

- The price cap scheme will be replaced by general price regulation on competitive segments of the market.

The Green Book also included a proposal for Telia's future principal direction of operations. Basically it suggests that Telia and its subsidiaries should stick to its core businesses and to their Swedish core market. Any other activities should only be continued if they complement the core operations, strengthen the company's profitability and do not include excessive risk.

9 Is there a need for privatisation?

9.1 The ownership of Telia

In the proposal for a new Telecom Act which will be presented for the parliament in the end of February 1997, the ownership of Telia in the years to come will probably be the most controversial issue.

Several political arguments have been raised about why Telia should remain state-owned. However, we do not believe that the ownership of Telia should be a pawn in a political game, such as securing universal services or creating jobs. It should only concern the regulator.

Also, it has been argued that the State controls its companies differently and less efficiently than private investors. Although this may not be the case, listed companies are subject to extensive review and analysis from a large number of actors on the capital market - Swedish and foreign analysts, institutional owners and the press - as well as certain disclosure requirements.

The main argument for a privatisation of Telia is that, as a state-owned company, it is limited in its strategic as well as operational and financial flexibility. Below we discuss these separately, even though they are indeed interrelated.

9.1.1 Strategic flexibility

In order to cope with the changing environment and manage its new strategy (broadened home market and a focus on new multimedia services), Telia needs to form strategic alliances and acquire companies. The present ownership can obstruct these strategic actions in two ways:

- The options for Telia to use share swaps as payment for acquisitions or for the establishment of an alliance are limited due to the state ownership.
- Many countries do not have the same separation of the State and state-owned companies. As a result, some potential strategic partners may consider Telia as a representative of the Swedish State, with a different agenda and with different requirements than a private company. This could prevent Telia from joining the strategically most attractive co-operations with other companies.

9.1.2 Operational and financial flexibility

Operational and financial flexibility are closely interrelated as financial flexibility often is a prerequisite for operational flexibility. Likewise, financial flexibility is often a prerequisite for strategic flexibility.

The operational flexibility of Telia can be negatively affected by state ownership as the limited potential of forming strategic alliances and acquiring companies with own shares implies higher cash outlays for Telia. The company still has to operate in the same uncertain environment and compensates for the absent alliances with own investments. As a result, the operational flexibility is reduced as Telia in more cases than probably desirable, needs to internalise functions rather than obtain the same outcome through an alliance.

Telia's financial risk is much higher than for many of its international peers. If competitive pressures should become much worse than expected, Telia might not have the required resources to make necessary investments, in which case the long-term competitiveness of the company would suffer.

Furthermore, the limited strategic flexibility may limit Telia's strategic ambitions. Should attractive investment opportunities arise that would imply a large investment outlay, Telia may be forced to pass on the investment, as the financial risk of the company would increase to unsustainable levels. With the financial flexibility of a private listed company, Telia would have access to the necessary capital to fund such investments.

A listed company has a possibility of raising capital from the market through a new share issue with preferential rights to existing shareholders. This is considered relatively uncontroversial as opposed to a capital injection from the state. The decision-making process for the State is much more complicated and time-consuming than in the case of private investors. This is especially obvious in times of economic recession, when a tightened state budget may force the government to prioritise in the allocation of limited government funds.

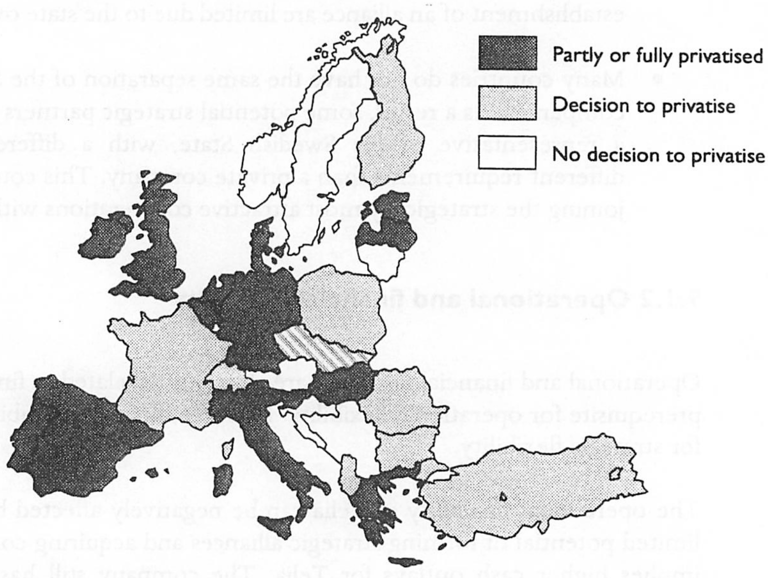
Generally, we feel that Telia's current lack of financial flexibility due to state ownership could reduce the company's strategic and operational flexibility in a way that may hurt the long-term competitiveness of the company. This, in turn, lowers the company's profit generation capabilities and impairs the value of the owner's (the State) shares.

9.1.3 International outlook

In Europe, only Norway, Sweden, Austria, Luxembourg, Lithuania and some parts of former Yugoslavia have not yet made the decision to privatise their PTT's.

The striped country is former Czechoslovakia, where the Czech Republic PTT is privatised and the Slovakian government has not made the decision to privatise its PTT.

European privatisations



Source: Carnegie Research

Below follows the timetable for future privatisations.

Company	Transaction value, USD	Time	Share	Comment
France Telecom	4.8bn	Apr 97	20%	Another tranche will reduce the state's share to 51%
Telefonica (Spain)	3.5-4bn	Mar 97	21%	The state divests its remaining share
Bezeq (Israel)	n/a	Apr 97	50%	The state's share is reduced from 75% to 25%
STET (Italy)	n/a	1997	n/a	Potential merger between STET and Telecom Italia before divestment
Telstra (Australia)	6-7.5bn	1997	33%	Divestment in three tranches beginning in 1997
Svyazinvest (Russia)	n/a	1997	25%	Potential merger with the long-distance operator Rostelkom (51% state-owned) before divestment
KPN (Netherlands)	n/a	1997	15%	The state's share is reduced to 33%
Albanian Telecom	n/a	1997	60-79%	40-49% listed, 20-30% to a strategic partner
BTC Bulgaria	0.75-1bn	1997/98	25%	Probably divestment to a strategic partner
Poland TPSA	n/a	1998	Minority	Delayed
Swiss PTT	n/a	1998/99	49%	
PTV Austria	n/a	n/a	25-30%	Divestment to a strategic partner
Turkish Telecom	3-8bn	n/a	34%	Delayed
Deutsche Telekom	13bn	'Before 2000'	17%	
Telecom Finland	n/a	'Before 2000'	n/a	

Source: Carnegie Research

9.2 Telia's capital requirement

As illustrated in Section 7, **International comparison**, Telia has a significantly high net debt ratio relative its international peers (85% vs median 40% in YE(95)). All of Telia's main competitors, with the exception of Deutsche Telekom, have for several years had a stronger balance sheet than Telia, despite the fact that Telia has had higher operating risk for a number of years, which should be compensated by a low financial risk, e.g. a lower net debt ratio.

Telia's operating risk and capital requirement reflect several factors:

- Telia's home market has been liberalised and competitive for several years.
- Telia has a smaller home market than several of its competitors and is also more dependent on the international traffic from a relatively small number of large corporate customers.
- Telia has not yet been able to compensate for its diminishing market shares in Sweden by expanding into new markets in other countries.
- Telia's new strategy, implying investments in an expanded home market and new multimedia services is characterised by a higher operating risk than the

risk in basic telephony services in Sweden. However, the higher risk should be offset by a higher return on investment.

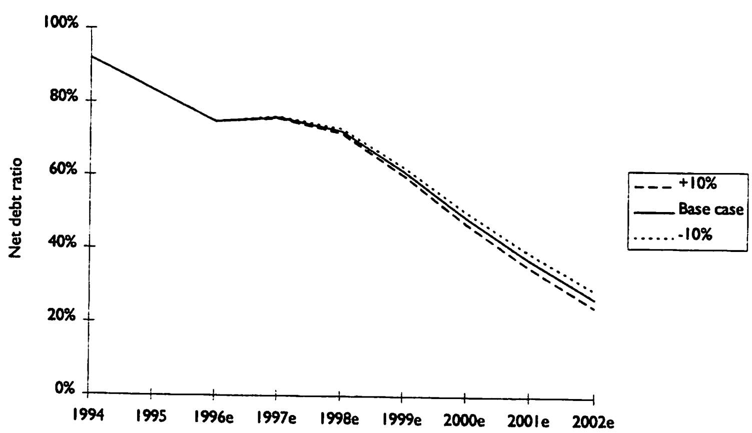
- Some of Telia's investments will be in joint ventures or the acquisition of less than 90% of a company. Therefore, Telia will not be able to use the cash flow generated from these operations to the same extent than if the companies were 100% owned.

- The accelerating development of new technology implies shorter product and service life cycles, which increase the operating risk of Telia.

We have conducted a sensitivity analysis on how Telia's net debt ratio - assuming no capital injection - is affected from changes in our earnings forecast.

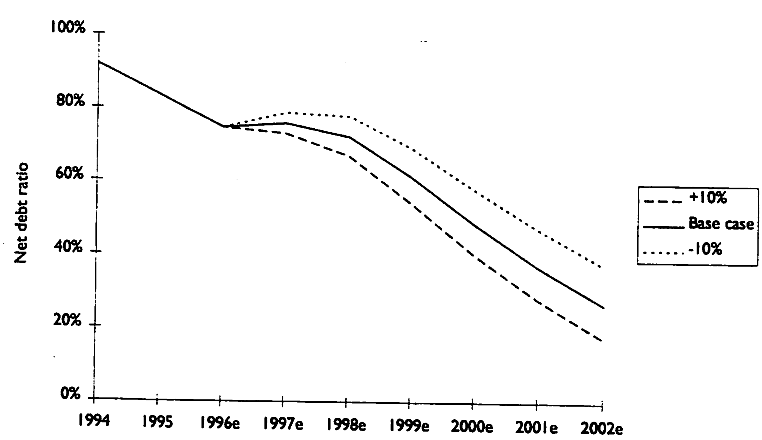
Sensitivity analysis - net debt ratio

Change in sales growth



Sensitivity analysis - net debt ratio

Change in operating margin

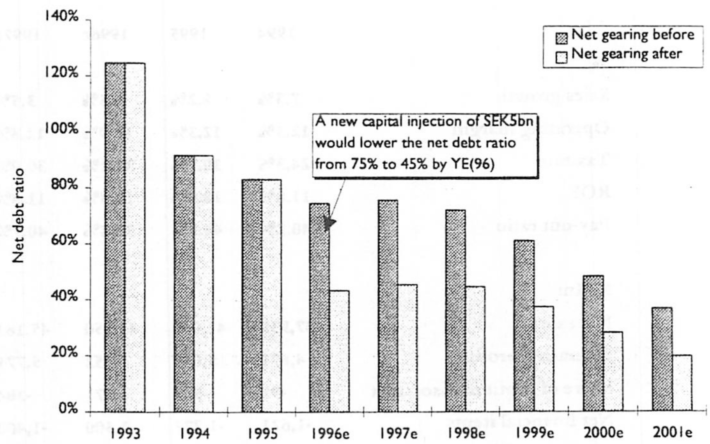


The future net debt ratio is very sensitive to the assumptions regarding operating margin. A 10% reduction of the operating margin every year accumulates in a 40% increase in the net debt ratio in 2002. The corresponding figure for sales growth is only 8.5%.

Altogether, we believe that Telia requires a capital injection in order to obtain a fair level of financial risk, relative to its competitors and its operating risk. If the target is a net debt ratio of 45% (75% in 1996e) Telia needs to raise SEK5bn. According to our earnings forecast, Telia's future net debt ratio will then develop as follows.

Telia's net debt ratio

Before and after a capital injection
Assuming dividend payout in line with listed peers



Source: Carnegie Research estimates

We have assumed a dividend payout ratio of 55% in our calculations which is in line with international peers. The graph illustrates that Telia's financial risk will not be reduced to a satisfactory level until after the turn of the century, unless the company receives a capital injection.

The table shows the additional capital required to meet certain net debt ratio targets:

Target net debt ratio		Capital injection
50%	->	SEK3.75bn
45%	->	SEK4.75bn
40%	->	SEK5.75bn

10 Earnings forecast

The table below outlines our main assumptions and earnings forecast:

	1994	1995	1996e	1997e	1998e	1999e	2000e
%							
Sales growth	7.3%	8.2%	6.3%	3.5%	5.2%	6.6%	4.9%
Operating margin	12.3%	12.3%	12.9%	12.8%	13.8%	15.1%	15.7%
Tax rate	24.3%	30.7%	31.1%	30.9%	30.1%	28.9%	28.3%
ROE	11.8%	10.9%	12.5%	11.8%	13.0%	15.2%	15.7%
Pay-out ratio	40.2%	44.8%	38.4%	40.7%	36.7%	31.2%	29.9%
SEKm							
Net sales	37,939	41,060	43,650	45,181	47,551	50,670	53,154
Operating profit	4,671	5,049	5,652	5,771	6,543	7,631	8,360
Share of profit in associates	-95	-545	-371	-304	-237	-64	24
Net financial items	-1,621	-1,277	-1,300	-1,400	-1,500	-1,500	-1,400
Pre-tax profit	2,955	3,227	3,981	4,067	4,806	6,066	6,983
Net profit	2,237	2,234	2,758	3,819	3,364	4,315	5,009
Dividends paid	421	900	1,000	1,058	1,146	1,234	1,345

Below, these earnings forecasts are described in more detail.

In summary, our earnings forecast and valuation are made without assuming any acquisitions - especially those that can be expected in connection with Telia Overseas and Telecom Eireann.

10.1 Revenues

Unfortunately, Telia does not announce segmented sales figures the way other telecom operators do. This greatly complicates the understanding and forecasting of Telia's net sales. However, we have divided Telia's net sales into five main groups:

- Basic fixed telephony (42% of net sales in 1995).
- Specialised services (Mobitel, InfoMedia and Finans, 30% of net sales in 1995).
- Other existing (customer equipment, leased lines, datacom, Internet etc., 28% of net sales in 1995).
- Other Nordic markets (Denmark, Norway, Finland and the Baltic states, 0% of net sales in 1995).
- New services in Sweden (new multimedia services, 0% of net sales in 1995).

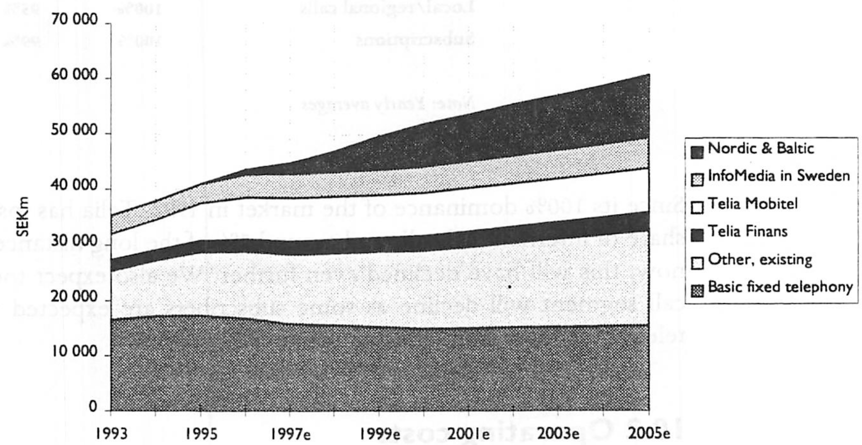
Future growth should therefore result primarily from:

- Other Nordic markets (not only voice, but also InfoMedia, finance, mobile, equipment, etc.).
- New services in Sweden.

Revenue from current Swedish operations, including mobile telephony, should enjoy combined sales growth of only 1-2% in the years to come. As a result, our forecasts and valuation depend much on Telia's will and ability to expand beyond its current business.

Revenue forecast

1993-2005e



Source: Carnegie Research estimates

Below, we comment on the largest segment, basic fixed telephony:

In summary, our assumptions are based on:

- Continuing market volume growth.
- Falling tariffs in all segments.
- Reduced market shares for Telia in all segments.

Regarding volume growth, we expect the international call segment to continue to post 7-8% annual volume growth, while the domestic segments will return somewhat lower growth of 4-5% for long-distance and around 2% for local calls. Overall, we expect traffic volume will increase by 4-5%. Fixed connections, however, should remain flat or even decline.

Although Telia's tariffs are well but not fully rebalanced, we do not expect the company will be able to continue to increase tariffs as a part of the process. We therefore expect overall tariffs will decline by around 2% annually - international calls by 9-10% and long-distance calls by 3%.

What happens if the international accounting rate systems totally collapse during the forecasting period, or at least among countries in the Western world? First of all, revenue from international telephony will fall. As these are estimated at around SEK2.4bn annually - the impact on total group revenue should be minimal. However, as margins (despite competition) continue to be rather high, the impact on profits would be somewhat higher. Fortunately, the cost element (payments to other telecom operators) of the international accounting rate systems would also disappear, which would dilute the negative effect, as would the increased volumes due to elasticity effects. On balance, we suggest that the net impact on Telia's profits would be modestly negative.

Telia's market share in the various segments should continue to decline:

Segment	1993	1996e	1999e
International calls	95%	76%	67%
Long-distance calls	100%	95%	80%
Local/regional calls	100%	95%	86%
Subscriptions	100%	99%	96%

Note: Yearly averages

Since its 100% dominance of the market in 1992, Telia has lost around 25% of its market share of international calls and around 5% of the long-distance market. Three years from now, this will have declined even further. We also expect the market share in the local call segment will decline as some subscribers are expected to leave Telia and buy all telecom services from another operator.

10.2 Operating costs

Telia does not specify operating costs in accordance with type of cost, as is the tradition among telecom operators. We are therefore only able to break operating costs into four main components:

- Cost of goods sold/external services (32% of net sales in 1995).
- Staff costs (24% of net sales in 1995).
- Other operating costs (12% of net sales in 1995).
- Depreciation (20% of net sales in 1995).

10.2.1 Cost of goods sold / external services

This cost component typically includes:

- Raw materials and consumables.
- Payments to other telecom operators.
- Maintenance costs.
- Marketing costs.
- Other external costs.

However, we do not know the exact break-down between the different types of costs. By reference to other telecom operators, we estimate that, in the case of Telia, this cost component can be broken down accordingly:

	% of net revenues	Expected trend (as % of net revenues)
• Raw materials and consumables	15%	Flat
• Payments to other telecom operators	3%	Down
• Maintenance costs	3%	Down
• Marketing costs	3%	Up
• Other external costs	8%	Up
Total cost of goods sold / external services	32%	Flat

Source: Carnegie research estimates.

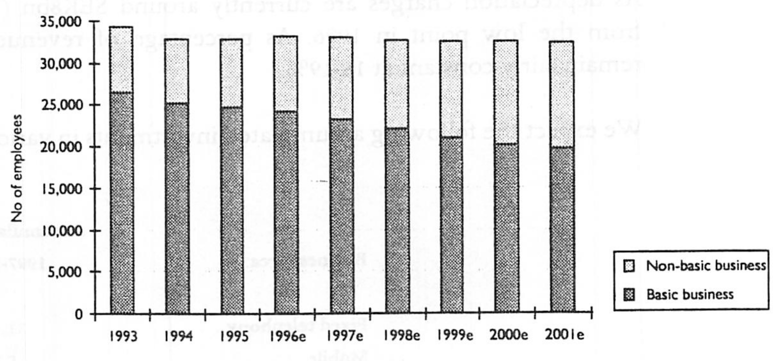
Overall, our estimates assume a flat development in relation to net revenues.

10.2.2 Personnel costs

Today, telecom operators across Europe are expanding new services heavily, while rationalising the basic fixed telephony segment. Therefore more employees are needed in the new business areas while there are substantial opportunities for greater staff efficiency in the traditional basic fixed telephony segments. Telia is no exception.

Overall, we have assumed that Telia is able to reduce the number of employees in the basic business from around 25,000 (YE(95)) to around 20,000 by YE(2000). However, growth in the non-basic services means that the number of employees in this area will increase from around 8,000 (YE(95)) to around 12,000 at YE(2000). On balance, the total number of employees will therefore remain virtually flat at the current level of around 32,000.

Number of employees
1993-2001e



Source: Carnegie Research estimates

Regarding wages, we assume employees in the non-basic business on average are more expensive than the employees in the basic business. Going forward, we assume a 3.8-3.9% increase in personnel cost per employee. This is probably above the general increase in wages, but the trend towards higher salary employees will move the total average upwards.

Total personnel costs should therefore increase by 2-4% annually. depending on when and how many of employees in the basic business are made redundant. As this increase (2-4%) is less than the expected increase in net sales, personnel costs as a percentage of net sales should decline from 28% in 1993 over 24% in 1995-96 to around 22% by the turn of the century.

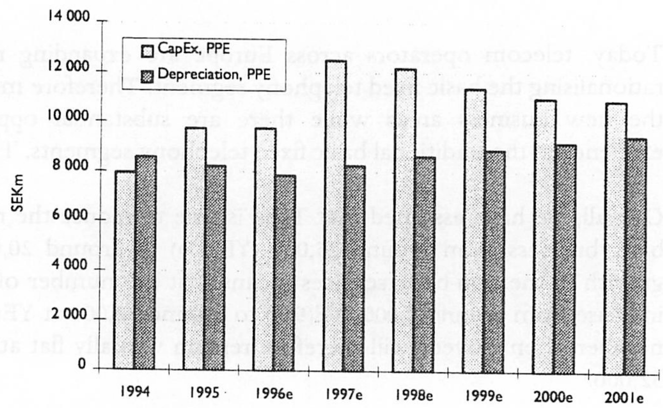
10.2.3 Other operating costs

As we do not know the composition of this cost component (bad debt provisions are probably included), we have assumed that these costs are a constant fraction of net sales.

10.2.4 Depreciation and investments

In the future, Telia will speed up its modernisation of the Swedish network, including the roll-out of a nation-wide DCS1800 mobile infrastructure. Furthermore, Telia's expansion in the other Nordic countries should increase capital expenditures requirements. We also expect capital injections in Unisource. In total, investment levels (PPE) should average SEK11-12bn in the years ahead, with peaks in 1997 and 1998:

Depreciation and investment forecast
1994-2001e



Source: Carnegie Research estimates

As depreciation charges are currently around SEK8bn (1996e), they will also increase from the low point in 1996. As percentage of revenues, however, depreciation will remain fairly constant at 18-19%.

We expect the following accumulated investments in various business areas:

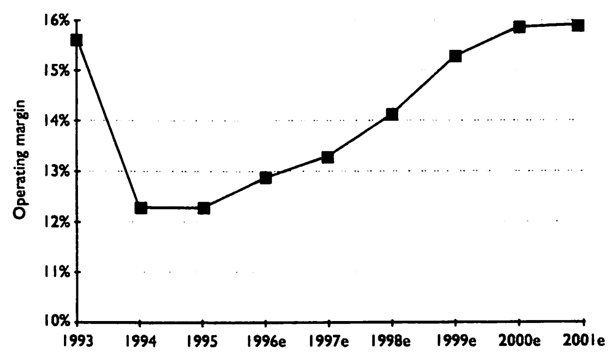
Business area	Accumulated investments 1997-2001, SEKm
Fixed telephony	31,000
Mobile	5,300
InfoMedia (excl. TIMTV)	2,600
Nordic and Baltic region	9,100
Unisource	5,000
Other	10,000
Total	*63,000*

Note that we have not included possible investments in Telecom Eireann, since this acquisition have not yet been closed. Nor have we included Overseas, since we have chosen to value this commitment as a separate investment.

10.2.5 Margins

Our sales and cost estimates imply that the operating margin should increase slightly in the years ahead:

Operating margin forecast
1993-2001e



Source: Carnegie Research estimates

We see four major reasons for an increase in the operating margin:

- A slower growth in staff costs than in sales.
- A marked increase in Telia Mobitel's profitability as we expect the GSM network to be profitable from 1997 onwards.
- The implementation of a new market-oriented organisation creates opportunities for further cost-rationalisation, i.e. on purchases.
- As a result of the modernisation of the infrastructure, we expect lower maintenance costs.

The development in recent quarters lends support to these forecasts as the Q3(96) operating margin was as high as 18.3 per cent - the highest level since Q3(94).

However, the Nordic expansion will put a pressure on margins in 1997 and 1998, as these expansions, initially, should see below average profitability.

10.2.6 Income from associated companies

Unisource is the most important associated company for Telia. On balance, we have assumed continued high losses up until 1998, where liberalisation across Europe takes off. After 1998, we have assumed a steep decline in losses, break-even in 2000 and profits thereafter. The main reason for this earnings pattern is that Unisource's current telecom activities are captured in a profit squeeze between revenues that already reflect the liberalised future while costs (i.e. leased lines) in most circumstances still reflect the monopoly situation in many countries across Europe.

10.2.7 Net financial items and cash flow

With capital expenditures requirements peaking in 1997 and 1998, Telia should show a negative cash flow in those years. Consequently, net interest expenses should increase slightly. After 1998, we believe that Telia will be able to enjoy a higher positive cash flow and thereby reduce the net debt. However, we expect that Telia will still have a net debt burden of close to today's level (SEK17-18bn) at the turn of the century.

10.2.8 Taxes

In general, we have assumed a 28% tax rate. However, as we believe that some of the losses in the associated companies are not tax deductible, the effective tax rate in the next few years is around 30-31%, declining to around 28% by 2002.

10.2.9 Dividends

In our cash flow estimates, we have assumed that Telia pays a dividend to the Swedish State equivalent to a 5% return on equity (start-of-year equity). This assumptions will keep dividend payments at around SEK1.0-1.3bn annually. These assumptions imply a pay-out ratio of just below 40% in the next two years, falling to close to 30% by the end of the century. In short, the Swedish state's dividend requirements, compared to a sector pay-out average of around 50-60%, actually increases Telia's net cash flow by around SEK1bn annually.

11 Valuation

Our valuation is presented in two steps. Firstly, we present our base-case scenario in which Telia has sufficient capital to pursue the investment opportunities that the company finds suitable. Then we summarise the valuation implications, if Telia does not expand beyond its current business scope. The valuation is done as of 22 November, 1996.

11.1 Initial considerations

Valuing companies can be done either by discounting cash flow and/or earnings figures by relevant cost of capital measures or by reference to other companies, i.e. either by an absolute (direct) valuation or by a relative (indirect) valuation approach:

Valuation approaches

Absolute valuation

Discounted Free Cash Flow

Capitalised earnings

Relative valuation

Peer group comparison

- PE
- PCE
- EV/EBITDA
- Yield

Local market comparison

- PE
- Yield / bond yield

Different investors will adopt different valuation approaches. A credible valuation of any company therefore needs to take into account more than one valuation approach.

We do not believe that a comparison with the local Swedish stock market will yield much additional insight into how Telia should be valued. This is due to the special cyclical character of the Swedish stock market and, perhaps more important, the fact that telecommunication operators in mature markets tend to be valued virtually independently of domestic market conditions. However, there may be special circumstances. For example, special tax treatments of dividend in Germany which created a high domestic demand for Deutsche Telekom shares due to a dividend yield for German investors above the yield on 10 year government bonds. This probably stretched the valuation compared to Deutsche Telekom's peer group.

11.2 Discounted Free Cash Flow

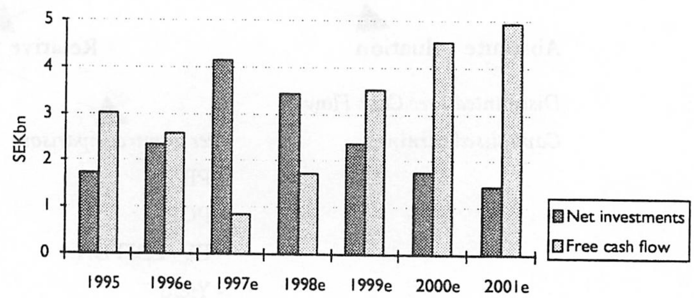
The Discounted Free Cash Flow (DCF) valuation approach has emerged as one of the most dominant valuation method of any company. The DCF approach values the different components of the company separately. The principle is outlined below:

	Present value of free cash flow in forecast period
+	**Present value of free cash flow in terminal period**
=	**Enterprise value**
+	**Value of non-operating assets**
-	**Net interest bearing debt**
-	**Value of minorities**
=	**Equity value**

11.2.1 Telia's free cash flow

Despite a somewhat lower margin than its international peers, Telia produces a very high annual free cash flow. However, as net investment requirements increase in the years ahead, the free cash flow will fall from the SEK3.0bn level in 1995 and 1996 to around SEK1-2bn in 1997 and 1998:

Net investment and free cash flow



Source: Carnegie Research estimates

With dividend payments at around SEK1bn to the State, and net interest expenses after taxes also around SEK1bn, net interest bearing debt will increase in the next two years.

11.2.2 Cost of capital

One of the main value determinants is the weighted average cost of capital - WACC. The components of WACC is cost of equity and cost of debt.

Cost of equity

Assuming an equity beta for Telia of 1.00 and a general risk premium for the Swedish market of 4.0% points, we estimate the cost of equity for Telia to be around 11.0%.

Domestic cost of equity	=	**Risk free rate**	+	**Beta**	x	**Risk premium**
11.0%	=	**7.0%**	+	**1.00**	x	**4.0%**

However, as telecom operators are predominately valued by cross boarder reference to other telecom operators, it can be argued that Telia's true cost of equity is not a function of its Swedish origin (i.e. the Swedish interest level and the Swedish risk premium) but more a function of the cost of equity for its international peers. We therefore estimate that the risk free rate should be 0.50 basis points lower and that the risk premium should be around 0.50 basis points lower:

International cost of equity	=	Risk free rate	+	Beta	x	Risk premium
10.0%	=	6.5%	+	1.00	x	3.5%

In total, these assumptions result in a cost of equity of 10.0%. As a consequence, we have set Telia's cost of equity to the mid-point of the range, which is 10.5%.

Cost of debt

Contrary to the cost of equity, Telia's cost of debt should be based purely on domestic conditions. We have assumed that the long-term debt is priced around 0.5%-point above the long-term yield on government bonds (corresponding to an AAA S&P rating). The (pre-tax) cost of debt is therefore 7.5% and the after-tax cost is 5.4%:

Pre-tax cost of debt	=	Risk free rate	+	Spread
7.5%	=	7.0%	+	0.5%
After tax cost of debt	=	Pre tax cost	x	(1-tax rate)
5.4%	=	7.5%	x	(1-28.0%)

WACC

By including a cost of capital of 12.0 per cent for Telia's investments in Unisource and non-consolidated companies due to a higher risk level, WACC is estimated at 9.0%:

Source of cost	Weight	Cost	
Cost of equity	55	10.5%	
After-tax cost of net debt	18	5.4%	
Total weighted liabilities	*73*	*9.2%*	
Unisource	3	12.0%	
Non-consolidated companies	3	12.0%	
Capital invested	67	9.0%	(WACC)
Total weighted assets	*73*	*9.2%*	

11.2.3 Value of non-operating assets

Telia's non-operating assets fall into three categories: Unisource, other associated companies and non-consolidated companies.

Unisource

The valuation of Unisource is highly uncertain as Unisource is currently loss-making and will probably remain so, as long as the European markets are not fully liberalised.

In valuing Unisource, we have assumed that:

- Telia has a 25% ownership in Unisource.
- Unisource will reduce losses greatly from 1998, achieve break-even around 2000 and be profitable thereafter.

Due to the limited information available, we have valued Unisource by way of the so-called capitalised earnings method - an approximation of the more theoretically correct DCF method.

The total equity value of Unisource is estimated at around NLG2.5bn implying a value of Telia's 25% stake of around SEK2.6bn.

The valuation of Unisource implies EV/sales multiples of 1.0 for 1996e. This multiple compares with EV/sales multiples of 2-3x for mobile operators on the brink of break-even and EV/sales multiples of 1.3-1.5 for mature full-scale telecom operators such as Tele Danmark. Our valuation of Unisource thus appears reasonable, given these comparisons and the uncertainty involved in valuing Unisource.

This value probably understates the true value of Unisource to Telia, as we would suggest that there are important strategic and operational synergies between the Telia organisation in Sweden and the Unisource organisation. However, the total value of Telia is not affected, as the value of Telia's 'basic organisation' is probably overstated.

Other associated companies

Other associated companies include Baltic Tele AB, Otecel SA and JT Mobiles Ltd, which all are valued at book value - which probably understate the true value - but insufficient information prohibits further elaboration. The total book value at YE(95) of these companies was approximately SEK380m.

Non-consolidated companies

Telia has two principal investments in non-consolidated companies - 6.8% of Omnitel, the Italian mobile operator and 10% of the Philippine fixed operator, Digitel Telecom.

Recently, Mannesmann of Germany offered Olivetti USD328m for 8.0% of Omnitel, suggesting that Telia's 6.8% is worth some USD280m or SEK1.9bn.

The financial information about Digitel is very poor. However, P/BV value multiples of 4-5x are common for fixed line operators in South East Asia. As the book value of Telia's 10% in Digitel is some SEK260m at YE(95), this would imply a value of around SEK1.2bn.

The total value of the non-consolidated companies is therefore around SEK3.1bn.

Total value of non-operating assets

The total value of Telia's non-operating assets is:

Assets	Estimated value SEKm
Associated companies	**2,990**
- Unisource	**2,612**
- Other	**378**
Non-consolidated companies	**3,074**
- Omnitel	**1,882**
- Digitel	**1,193**
Total	**6,064**

The value of these investments is significant.

11.2.4 Terminal value

The terminal value is very often of great importance to the total value of the company. Telia is no exception. The present value of the terminal value accounts for approximately two-third of the total enterprise value.

Our assumptions in the terminal period, after year 2005, are therefore critical to the valuation. Our assumptions for the terminal period are as follows:

- 2% annually perpetual growth, which is less than our normal 3% assumption. We do not expect the telecommunication industry to continue to grow at the same rate as the rest of the economy. Growth in telecommunication is the same thing as growth in information handling, and there is a restriction on how much information the individual can handle.

- Operating margin in line with the last year of the forecast period (i.e. 15.4%). The operating margin in the DCF valuation differs from the ordinary operating margin as goodwill amortisation charges are excluded in the DCF approach.

These assumptions imply:

- A ROI of 11.6% in the terminal period (slightly below the 11.9% average in the forecasting period).

- An EV/EBITDA multiple of 4.5x, which is in line with the current valuation of European telecom operators.

We are therefore confident with our terminal period assumptions.

11.2.5 DCF valuation summary

Below, we have summarised our DCF valuation of Telia. The table indicates that:

- Approximately 45% of Telia's DCF equity value results from the discounted cash flow in the forecast period.
- Approximately 80% of the equity value results from the terminal value.
- Non-operating assets such as Unisource and non-consolidated companies constitute more than 10% of the equity value.
- Net interest-bearing debt and dividend paid reduces the equity value by 35%.

	Value contributor	SEKbn	%	%
	PV of free cash flow in forecast period	23.2	37%	47%
+	PV of terminal value	39.0	63%	79%
=	Enterprise value	62.2	100%	126%
+	Value of non-operating assets	6.1	-	12%
-	Net interest bearing debt	-18.0	-	-36%
-	Dividends paid since year-start	-1.0	-	-2%
-	Value of minorities	0.0	-	0%
=	Equity value at January 1, 1996	49.3	-	100%
x	Time adjustment factor	1.10	-	-
=	Equity value at November 22, 1996	54.4	-	-

In total, our DCF valuation indicates a value of Telia of around SEK54bn. However, telecom operators - both full-scale operators such as Tele Danmark and mobile operators such as Vodafone - are rarely valued by the market according to the values indicated by DCF analysis. Typically, the discount to the DCF value is around 10-20%. By using a 15% discount to our DCF value, the value of Telia is reduced to about SEK45bn, which we find more in line with alternative valuation methods.

11.2.6 Sensitivity of DCF valuation

The table below clearly indicates that our DCF valuation (as most often is the case) is most sensitive to the assumptions regarding operating margin and WACC.

SEKbn			Relative change in value drivers		
Value driver	Forecast period avg.	Base case scenario	+10%	-10%	Avg. change (%)
Sales growth	4.4%	54.4	55.2	53.6	1.5%
Operating margin*	15.2%	54.4	63.7	45.1	17.1%
Tax rate	28.8%	54.4	51.3	57.5	5.7%
Investments	nmf	54.4	52.0	56.8	4.4%
WACC	9.0%	54.4	45.9	65.4	17.9%
Terminal period growth	2.0%	54.4	54.8	54.0	0.7%

**) Excl. goodwill amortisation*

11.3 Peer group comparison

Using peer group valuation, choices of which companies to include in the peer group and which valuation multiples to use must be made.

11.3.1 Choice of companies in peer group

Telecommunication operators are increasingly valued by reference to similar companies in other countries because:

- Investors are becoming more international.
- The technology and services offered are relatively standardised and homogenous across countries.
- The regulatory environment across Europe will be virtually the same after 1998 when most countries will open up for competition.

However, not all listed telecommunication operators are suitable for comparison with Telia. We would prefer operators in markets that today have the following characteristics:

- Mature in terms of fixed line telephony.
- Fully liberalised.
- Rather intense competition.

Furthermore, we would prefer to compare with operators that offer full-scale service (i.e. fixed, mobile, CATV etc.) as there are significant differences in valuation multiples for fixed operations and mobile operations. These requirements limits our peer group to companies such as BT (UK), Tele Danmark (Denmark), KPN (Netherlands) and Deutsche Telekom (Germany).

We have chosen to exclude Southern European operators such as Telecom Italia (Italy), Telefonica (Spain) and Portugal Telecom (Portugal) because: (i) Telecom Italia does not have any mobile operations, which significantly lowers its valuation multiples, (ii) Telefonica's and Portugal Telecom's markets are not mature and the current level of competition is relatively low. RBOC's (regional telephone operators in the US) are also excluded. For historical reasons, these companies have a completely different break-down of operations than Telia and most other European telecommunication operators.

11.3.2 Choice of valuation multiples

The comparative valuation of telecommunication operators have become increasingly complex in recent years, probably because the universe of listed telecommunication operators has increased substantially. Only a few years ago, BT was the only listed European telecommunication operator. Since then, many European governments have decided to (partly) privatise the incumbent telecommunication operator.

There are a variety of multiples to chose from:

	Object of valuation	
	Shareholders equity	Company as an entity
Simple multiples	PE (x) PCE (x) Yield (%)	EV/EBITDA (x)
Complex multiples	PE/EPS growth Yield/interest rates EP/interest rates	EV/EBITDA/EBITDA growth

Note: EBITDA growth is often approximated by EPS growth

By comparing the absolute valuation multiple with growth and interest rates, the influence of the two latter on the valuation multiple is incorporated into the comparison.

Below, we will use PE multiples and EV/EBITDA multiple as valuation yardsticks, as they dominate peer group comparisons among telecom operators analysts.

PE multiple valuation

The principle in PE multiple valuation is:

Value of equity = PE multiple x Net profit

The problems with applying PE multiple valuation to Telia are:

- Telia has very valuable non-consolidated companies which are not consolidated in Telia's profit and loss statement;
- losses in Unisource (and other associated companies) reduce Telia's consolidated net profit with 10-15%, and thus Telia's value based on PE multiples.

Analysts can therefore chose between three alternatives when valuing Telia by the use of PE multiples:

1. Using the peer group average PE multiple on Telia's reported and expected net profits. This approach will yield the lowest valuation of Telia as (i) the losses of Unisource actually reduce the overall value, despite Unisource's positive value and as (ii) the non-consolidated companies are not captured in the valuation.

2. To offset some of the problems above, the estimated value of non-consolidated companies can be added to the resulting value from the first alternative. This approach will yield a result somewhat above the value from the first alternative.

3. To fully offset the problems above, the peer group average PE multiple can be applied to Telia's adjusted net profit, where the loss contributions from Unisource are excluded (i.e. added back). The value of Unisource and the non-consolidated companies are then added to the resulting value (the value of the basic business). This approach will result in the highest value from the PE multiple valuation.

Alternative 1

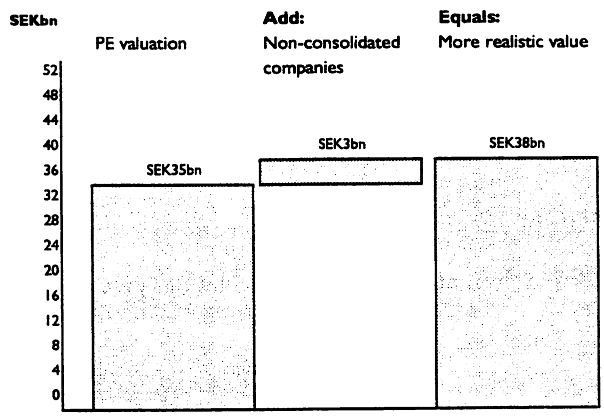
The PE multiples from our peer group are outlined below along with the resulting equity values of the Telia group:

	1996e	1997e	1998e	1999e
PE (x)				
- Tele Danmark	12.2	10.1	9.5	9.2
- BT	11.1	10.5	9.8	9.2
- Deutsche Telekom	nmf	16.1	11.1	9.5
- KPN	12.7	10.9	10.1	9.2
Average	*12.0*	*11.9*	*10.1*	*9.3*
Telia net profit (SEKm)	2,732	3,050	3,537	4,431
Telia equity value (SEKm)	32,842	36,262	35,827	41,069

Due to a high profit growth in Telia, especially after 1998, when losses in Unisource begin to decline fast, the value of Telia based on 1999e estimates and multiples is higher than the values based on 1996e, 1997e and 1998e estimates and multiples.

Alternative 2

The value of the non-consolidated companies can be added to the resulting equity value of Telia from alternative 1 of about SEK40bn in order to get a more realistic picture:

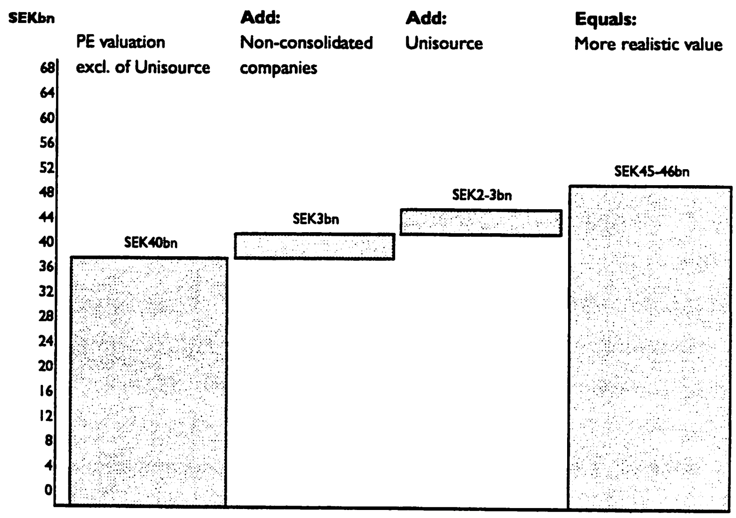


Alternative 3

Going even more into detail, the peer group PE multiples can be applied to Telia's profit, excluding Unisource:

	1996e	1997e	1998e	1999e
PE (x)				
- Tele Danmark	12.2	10.1	9.5	9.2
- BT	11.1	10.5	9.8	9.2
- Deutsche Telekom	nmf	16.1	11.1	9.5
- KPN	12.7	10.9	10.1	9.2
Average	*12.0*	*11.9*	*10.1*	*9.3*
Telia net profit (SEKm), excl. Unisource	3,102	3,354	3,774	4,495
Telia equity value (SEKm), basic business	37,300	39,877	38,230	41,667

However, the value of Unisource and the non-consolidated companies must be added to this in order to get the total value of the Telia group:



The figure above shows how the value of the Telia group is composed of (at least) three different components:

- Telia's basic business.
- Unisource.
- Non-consolidated companies.

In addition to this, the option value of Telia Overseas (se Section 10.6.2) should be included in the total Telia group valuation.

Summary of PE multiple valuation

The three alternative PE multiple valuations give a wide range of values for Telia:

PE valuation alternative	Resulting value of Telia (SEKbn)
Alternative 1	35
Alternative 2	38
Alternative 3	45-46
Range	35-46

Even though we prefer alternative 3, we expect that the market would value Telia more in line with alternative 2, as telecommunications operators very seldom get any valuation credit (i.e. higher PE multiples), even though it is obvious that the company has made large investments that have high net present values, despite the current loss-making situation.

11.3.3 EV/EBITDA multiple valuation

Rather than valuing 'just' the equity, the EV/EBITDA valuation approach values operating capital, i.e. all the (net) assets that are employed in order to generate EBITDA and, therefore, sales. This valuation approach excludes net interest bearing debt, associated companies (as these are often not included in sales and EBITDA figures, but are on-line consolidated) and non-consolidated companies. Thus, like the PE valuation approach, the EV/EBITDA does not capture all contributors to value. The ensuing value therefore needs to be adjusted for not only net interest bearing debt, but also the value of Unisource, other associated companies and non-consolidated companies.

The valuation is outlined in the table below:

	1996e	1997e	1998e	1999e
EV/EBITDA (x)				
- Tele Danmark	3.92	3.44	3.37	3.36
- BT	3.94	3.82	3.72	3.59
- Deutsche Telekom	4.59	4.28	4.06	3.96
- KPN	4.18	3.86	3.73	3.64
Average	*4.16*	*3.85*	*3.72*	*3.64*
(SEKm)				
Telia EBITDA	13,615	14,607	15,673	16,941
Telia enterprise value	56,573	56,247	58,310	61,652
- Telia net interest bearing debt	17,200	17,200	17,200	17,200
+ Value of Unisource stake	2,612	2,612	2,612	2,612
+ Value of other associated companies	378	378	378	378
+ Value of non consolidated companies	3,074	3,074	3,074	3,074
= Telia equity value	45,438	45,111	47,174	50,516

The EV/EBITDA valuation approach indicates a value of Telia that is more in line with alternative 3 of the PE-multiple valuation approaches as both break down Telia's value into three components, the basic business, associated companies and non-consolidated companies.

11.4 Local market comparison

Comparing across sectors (i.e. comparing Telia with the market in general), the number of valuation multiples that yields sensible results is reduced to the PE-multiple. Even valuation multiples such as PCE and EV/EBITDA loose credibility when comparisons are made among companies with different asset and cost structures.

Our local market comparison takes its starting point in the PE relatives of the peer group to their respective local stock markets. The average PE relative of the peer group is then applied to the Swedish market and Telia:

11.5.2 Value reduced by SEK19bn in two years

In our previous report on Telia (dated 6 February, 1995), we estimated the value of Telia to be about SEK55bn (range SEK50-60bn). Since then, the value of Telia has been drastically reduced:

Telia's equity value	Date	SEKm
Previous Carnegie estimate	February 6, 1995	55,000
Equivalent value today*	November 22, 1996	66,000
Current Carnegie estimate	November 22, 1996	45,000
PV of dividends received in last two years	-	2,100
Value loss in two years		*18,900*

**) By assuming a cost of equity of [10.5%]*

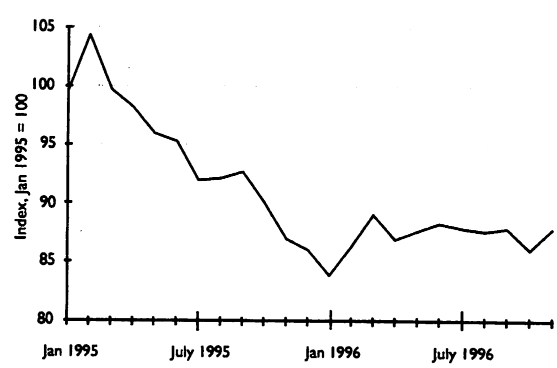
The equivalent of SEK55bn on 6 February, 1995 is currently. SEK66bn. Compared to our current value estimate of SEK45bn and adding back dividends paid in the last two years, the value loss in just two years is around SEK19bn.

Reasons for the loss of value

We see two major (and interrelated) reasons for the value decline of Telia in the past two years:

- Increased speed of liberalisation and competition which has meant downgrading of estimates for almost all telecom companies operating in mature and competitive markets (i.e. UK, Denmark and Sweden), which has led to...
- ...a marked underperformance of telecom shares in Europe and increased uncertainty among investors and hence reluctance to put weight on long-term projections.

Relative performance of European telecom sector to MSCI

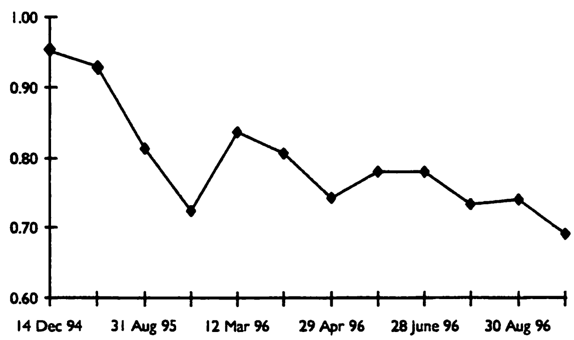


Source: Morgan Stanley

Since our most recent report on Telia, the European telecom operators have underperformed the broader MSCI Europe index by some 12-13%.

In line with the growing stock markets in 1995 and 1996, the sector underperformance has resulted in a decline in the relative PE multiples of telecom shares to the local market indices. This point is illustrated by the relative PE of Tele Danmark:

Relative PE of Tele Danmark, Dec. 1994 - Aug. 1996



Source: Carnegie Research

We stress, however, that there are differences within the telecom sector. The best performers have been the south European telecom operators (Telefonica and Portugal Telecom), while the poorest performers have been the north European telecom operators (Tele Danmark, BT and KPN).

11.6 Value of expansion

Telia's value depends substantially on the success of the company to expand beyond its current business scope as the profitability of its current business is most likely to suffer in the years ahead. The company will therefore have to expand in two directions:

- Introduce new services that can use the current infrastructure, and...
- ...entry into other geographical markets in high ROI segments such as international calls, business clients, etc.

		Geographical presence	
		Sweden	New markets
Services	Existing services	ROI under pressure	Focus on high ROI segments
	New services	New services on existing infrastructure	High ROI services & segments

Below, we will try to estimate (i) the value to Telia of the expansion in other Nordic countries and the Baltic states, and (ii) the value to Telia of the investment in Telia Overseas.

Our main assumptions regarding Telia's expansion in the other Nordic countries and in the Baltic states are outlined in the table below:

SEKm	1997e	1998e	1999e	2000e	2001e
Denmark	874	1,472	2,304	2,831	2,967
Finland	605	1,099	1,520	1,810	1,911
Norway	225	667	1,588	2,264	2,431
Baltic states	242	399	586	805	1,063
Total revenues	1,945	3,638	5,997	7,710	8,372
Capital invested	3,800	5,610	6,180	6,430	6,560
Accumulated CapEx	4,400	6,900	8,300	9,500	10,700
Revenues/capital invested (x)	0.51	0.65	0.97	1.20	1.28
Assumed pre-tax ROI (%)	5.0%	25.0%	35.0%	40.0%	40.0%
Operating profit	190	1,403	2,163	2,572	2,624
Implied operating margin (%)	9.8%	38.6%	36.1%	33.4%	31.3%

We assume that Telia enters the high margin segments which require relatively low capital expenditures levels. This is also a function of the ability to utilise already existing assets in Sweden, i.e. in connection with routing of international calls. The return on investment levels is therefore higher than for the Telia group on average.

Should the success rate of this expansion not meet our assumptions, the table below indicates the impact on Telia's value compared to our base case scenario.

Success rate	DCF value, SEKbn	Change from base-case scenario
150%	64.0	18%
125%	59.3	9%
100%*	54.4	0%
75%	49.6	-9%
50%	44.8	-18%

**) 100% = Base-case scenario*

The impact of the expansion is rather significant, as a 'failure' of 50% - Telia only meets 50% of our sales target and thus only invests 50% of what we have assumed - reduces the value of the company by 18%. Likewise, a success of 150% increases the value by 18%. We therefore see this expansion as critical to Telia's long-term performance.

11.6.2 Telia Overseas expansion

Telia Overseas (65% owned by Telia) plans to invest around SEK1bn in overseas ventures, typically in mobile operators. As these investments opportunities are difficult to include in our base-case scenario, we have chosen to keep the valuation of Telia Overseas separately.

In our valuation of Telia Overseas, we have made the following assumptions:

- Annual investments of around SEK1bn.
- Holding period of investment of around three years.
- High initial ROI and therefore also high initial required return.
- Declining ROI (and required return) in line with the maturing of overseas telecom markets.
- After the holding period, the proceeds from the sales are not expected to generate added value (i.e. ROI = WACC).

Our assumptions are summarised in the table below:

SEKm	1997	1998	1999	2000	2001	2002	2003	2004	2005
Investments	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Expected ROI (%)	30%	27%	24%	22%	20%	18%	16%	14%	13%
Required return (%)	15%	14%	14%	13%	12%	12%	11%	10%	10%
'Spread' (%)	15%	13%	11%	9%	7%	6%	5%	4%	3%
Duration (years)	3	3	3	3	3	3	3	3	3
EVA	150	150	150						
		128	128	128					
			108	108	108				
				90	90	90			
					75	75	75		
						61	61	61	
							49	49	49
								39	39
									30
Total EVA/year	150	278	385	325	272	226	185	149	118
time	1	2	3	4	5	6	7	8	9
PV of EVA	130	213	263	200	153	117	89	67	50
Total PV of EVA's	1,283								

Note: EVA = Economic Value Added

The total sum of the prospective added value from these investments is therefore around SEK1.3bn. For Telia, the prospective value added is 65% of this or around SEK835m. We do, however, stress that the added value from these investments has an option-like character.

Appendix I: Financials

Profit & loss *SEKm*	1993	1994	1995	1996e	1997e	1998e	1999e	2000e	2001e
Net sales	35,347	37,939	41,860	43,650	45,181	47,551	50,670	53,154	54,990
Net sales growth (%)	0.1%	7.3%	8.2%	6.3%	3.5%	5.2%	6.6%	4.9%	3.5%
Operating costs	22,039	24,649	27,720	29,998	30,895	32,118	33,890	35,427	36,664
- Personnel costs	9,902	9,177	9,883	10,356	10,667	10,958	11,342	11,774	12,194
- COGS / ext. services	10,500	11,736	12,941	13,968	14,345	14,979	15,961	16,743	17,322
- Other operating costs	1,637	3,736	4,896	5,675	5,874	6,182	6,587	6,910	7,149
EBITDA	13,308	13,290	13,340	13,652	14,286	15,433	16,780	17,726	18,326
EBITDA margin (%)	37.6%	35.0%	32.5%	31.3%	31.6%	32.5%	33.1%	33.3%	33.3%
Depreciation	7,773	8,619	8,291	8,000	8,515	8,890	9,149	9,367	9,605
Operating profit	5,535	4,671	5,049	5,652	5,771	6,543	7,631	8,360	8,721
Operating margin (%)	15.7%	12.3%	12.3%	12.9%	12.8%	13.8%	15.1%	15.7%	15.9%
Share of profits in ass. comp.	-41	-95	-545	-371	-304	-237	-64	24	383
Net financial items	-1,541	-1,621	-1,277	-1,300	-1,400	-1,500	-1,500	-1,400	-1,300
Pre-tax profit	3,953	2,955	3,227	3,981	4,067	4,806	6,066	6,983	7,804
Tax	806	719	991	1,238	1,258	1,447	1,751	1,974	2,204
Tax rate (%)	20.4%	24.3%	30.7%	31.1%	30.9%	30.1%	28.9%	28.3%	28.2%
Minorities	-1	-1	2	-15	-10	-5	0	0	0
Net profit	3,148	2,237	2,234	2,758	2,819	3,364	4,315	5,009	5,680

Balance sheet *SEKm*	1993	1994	1995	1996e	1997e	1998e	1999e	2000e	2001e
Intangible fixed assets	188	215	941	1,401	1,156	907	658	476	339
Tangible fixed assets	41,250	39,721	40,897	43,016	47,475	51,264	53,993	56,037	57,698
Financial fixed assets	1,564	1,939	2,372	2,372	2,395	2,430	2,477	2,514	2,542
Total fixed assets	43,002	41,875	44,210	46,789	51,026	54,601	57,128	59,027	60,579
Total current assets	12,460	12,792	13,164	13,616	13,764	14,284	15,019	15,746	16,656
Total assets	55,462	54,667	57,374	60,405	64,790	68,885	72,146	74,774	77,234

SEKm	1993	1994	1995	1996e	1997e	1998e	1999e	2000e	2001e
Shareholders equity	17,926	19,842	21,169	22,927	24,688	26,905	29,986	33,650	37,750
Minorities	0	6	13	13	13	13	13	13	13
Long-term ib debt	18,029	16,815	16,895	16,388	17,996	18,711	17,664	15,598	13,233
- Pension provisions	13,792	14,615	14,875	11,000	7,000	5,000	5,000	5,000	5,000
- Other	4,237	2,200	2,020	5,388	10,996	13,711	12,664	10,598	8,233
Long-term non-ib debt	1,655	2,438	3,218	3,961	4,464	4,754	5,016	5,214	5,324
Short-term ib debt	5,390	2,439	2,493	2,493	2,493	2,493	2,493	2,493	2,493
Short-term non-ib debt	12,462	13,127	13,586	14,623	15,136	15,930	16,974	17,807	18,422
Total liabilities	55,462	54,667	57,374	60,405	64,790	68,885	72,146	74,774	77,234
Net interest bearing debt	22 379	18 255	17 671	17,164	18,772	19,487	18,440	16,374	14,009
Net gearing (%)	125%	92%	83%	75%	76%	72%	61%	49%	37%

Cash flow statement

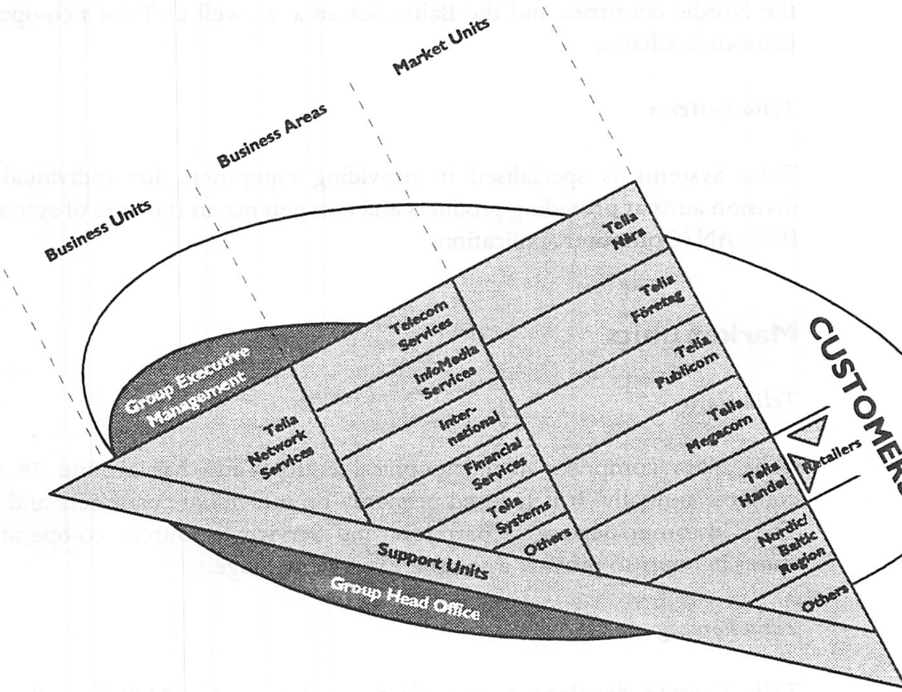
SEKm	1993	1994	1995	1996e	1997e	1998e	1999e	2000e	2001e
Pre-tax profit	3,953	2,955	3,227	3,981	4,067	4,806	6,066	6,983	7,804
- Taxes paid	-24	-18	-206	-495	-755	-1,158	-1,489	-1,777	-2,094
- Change in NWC	2,926	-800	170	200	69	107	140	112	83
- Profit in associates	-41	-95	-545	-371	-304	-237	-64	24	383
+ Depreciation	7,773	8,619	8,291	8,000	8,515	8,890	9,149	9,367	9,605
= Cash flow from operations	14,669	10,851	12,027	12,057	12,200	12,882	13,931	14,661	15,014
- Investments	-4,574	-7,118	-10,209	-10,550	-12,750	-12,450	-11,650	-11,250	-11,150
- Dividends paid	-1,180	-421	-900	-1,000	-1,058	-1,146	-1,234	-1,345	-1,499
+ Other adjustments	-219	812	-334	0	0	0	0	0	0
= Change in net ib debt	8 696	4,124	584	507	-1,608	-714	1,047	2,066	2,365

Key ratios

	1993	1994	1995	1996e	1997e	1998e	1999e	2000e	2001e
SEKm									
Total shareholders equity	17,926	19,842	21,169	22,927	24,688	26,905	29,986	33,650	37,750
Net interest bearing debt	22,379	18,255	17,671	17,164	18,772	19,487	18,440	16,374	14,009
Operating capital	40,305	38,103	38,853	40,104	43,473	46,405	48,439	50,036	51,772
Capital employed	41,345	39,102	40,570	41,821	45,190	48,122	50,156	51,753	53,489
Equity/assets ratio	0.32	0.36	0.37	0.38	0.38	0.39	0.42	0.45	0.49
Debt/equity ratio, net	1.25	0.92	0.83	0.75	0.76	0.72	0.61	0.49	0.37
Debt/equity ratio, gross	1.31	0.97	0.92	0.82	0.83	0.79	0.67	0.54	0.42
Return on equity		11.8%	10.9%	12.5%	11.8%	13.0%	15.2%	15.7%	15.7%
Return on operating capital		11.9%	13.1%	14.3%	13.8%	14.6%	16.1%	17.0%	17.1%
Average net interest exp. rate		6.6%	7.7%	6.6%	7.5%	7.8%	7.8%	7.9%	8.0%
Capital turnover rate, op. capital		96.8%	106.7%	110.6%	108.1%	105.8%	106.8%	108.0%	108.0%
Capital turnover rate, cap. empl.		94.3%	103.1%	106.0%	103.9%	101.9%	103.1%	104.3%	104.5%
EBITDA margin		35.0%	32.5%	31.3%	31.6%	32.5%	33.1%	33.3%	33.3%
EBIT margin		12.3%	12.3%	12.9%	12.8%	13.8%	15.1%	15.7%	15.9%

Appendix II: Telia's new organisation

Telia's new market-focused organisation is divided in three main parts. Telia Network Services operates, maintain and develop the infrastructure. The different business areas develop applications, products and services in the network, and the market units, finally, market the products and services to the customer.



Business Units

Telia Network Services

Telia Network Services develops, builds and operates the fixed-line network in order to provide telecom services to Telia's customers and the different entities of Telia.

Business areas

Telecom Services

Telecom Services was established in order to provide efficient and easily attainable telecom services within fixed-line and mobile telephony, as well as combinations of them. Operations are in two separate companies - Telia TeleCom and Telia Mobitel. Telia TeleCom develops and packages services for fixed-line telephony. Telia Mobitel is responsible for the development of mobile services, as well as operations and maintenance within the mobile telephony area.

InfoMedia Services

Telia InfoMedia is the name of Telia's new division for information and media services. The division InfoMedia includes Telia InfoMedia Respons, Telia InfoMedia Television, Telia InfoMedia Reklam and the projects 'Passagen' and Telia On-Line. Starting from 1 January, 1996 all the different units within InfoMedia have been renamed.

Financial Services

Financial Services include Telia Finans, Telia Card, Telia Trading, Sergel Kredittjänster, Telia Försäkring, Telia Reinsurance, Telia Treasury, Telia Billing and Telia Venture Capital.

International

Division International consists of Telia's international consulting company, Telia Swedtel and the newly established Telia Overseas. International also comprises Telia's activities in the Nordic countries and the Baltic Sea area, as well as Telia's co-operation within the Unisource alliance.

Telia Systems

Telia Systems is specialised in providing equipment for individual customers. The division aims at providing products and competence in the area of system integration and PC/LAN/Computer applications.

Market units

Telia Nära

Telia Nära comprises 40 geographical entities and has around 28 million customer contacts annually. It is focused primarily on individual customers and small companies. The Customer Service Department and Service Resources co-operate with the Telia stores in order to provide a complete service package.

Telia Företag

Telia Företag develops communication solutions for 33,000 small and medium-sized companies in Sweden. Telia Företag is built on teams for sales, supplies and customer service.

Telia PubliCom

Telia PubliCom specialises in important public applications. It develops and supplies IT-solutions to municipalities, health-care institutions, government bodies and interest groups. Telia PubliCom is represented at about 20 different sites throughout Sweden.

Telia MegaCom

Telia MegaCom provides complex computer and communication solutions to companies and organisations. The customers of Telia MegaCom usually have geographically dispersed activities and operate both locally and internationally. Telia MegaCom offers business development and packaged solutions. Activities take place in close co-operation with the respective customer. The company is represented at approximately 25 different sites all over Sweden.

Telia Handel

Telia Handel represents Telia's contacts with the external sales outlets. There are approximately 10,000 retailers comprising nearly 30,000 salespeople. Telia Handel will be represented at 12 locations.

Appendix III: Telecom licences

Leased circuits

Licence holder	Owner
Tele2 AB	Netcom Systems AB
Dotcom Data & Tele Communications	Enator AB
FTNS Nordic AB	France Telecom
Telia AB	The Swedish-State
Banverket	The Swedish State
MFS Communication AB	MFS Communications Inc
Telenordia AB	BT, Tele Danmark & Telenor
Telecom Finland AB	Telecom Finland Oy
AB Stokab	The City of Stockholm

Voice telephony service

Licence holder	Owner
Telia AB	The Swedish-State
Tele2 AB	Netcom Systems AB
FTNS Nordic AB	France Telecom
MFS Communication AB	MFS Communications Inc
Cyberlink Sweden AB	RSL Com. & Cyberlink Inc.
Singapore Telecom Intl. Svenska AB	Singapore Telecom
Telenordia AB	BT, Tele Danmark & Telenor
Nordiska Tele8 AB	Facilicom Intl. and others
Tele1 Europe AB	Private investor
Telecom Finland AB	Telecom Finland Oy
FT Nordphone AB	Private investor
TELiT-Galesi TeleCom Intl. AB	Francesco Galesi
First Telecom Sweden AB	Private investor
NETnet Intl. SA	Private investor

Mobile telephony service

Licence holder	Owner
Telia AB	The Swedish-State
Europolitan AB	NordicTel Holdings AB
Comviq GSM AB	Netcom Systems AB
Telia AB (Air telephony)	The Swedish-State
Telia AB (ERMES)	The Swedish-State
Tele Danmark Intl. (ERMES)	Tele Danmark AS
Netcom Systems AB (DCS1800)	Netcom Systems AB
Telia AB (DCS1800)	The Swedish-State
Europolitan PCN AB (DCS1800)	NordicTel Holdings AB
C&W FlightNet Ltd (TFTS)	Cable&Wireless
Tele8 Kontakt AB (DCS1800)	Private investor

Company index

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