November 29, 1996
London

J.P. Morgan Securities Ltd. – Equity Research
Iain M. Johnston (44-171) 325-5056 (johnston_iain@jpmorgan.com)
Jonathan Adams (44-171) 325-4900 (adams_jonathan@jpmorgan.com)
Sean Faughnan (44-171) 325-4877 (faughnan_sean@jpmorgan.com)
Nick Delfas (44-171) 325-4779 (delfas_nicholas@jpmorgan.com)

JPMorgan

K 206/96 104

Information Report

Telia

How to Grow Earnings in a Tough Market

This report is published in conjunction with reports on:

The Nordic Telecom Sector
NetCom GSM
PT Finland
Tele Danmark

The European **Telecommunications Equity Research** group recently published the following reports:

STET/Telecom Italia (November 15, 1996)
BT (November 7, 1996)
KPN (October 23, 1996)
BT (October 23, 1996)
The French Cellular Market (October 23, 1996)
Alcatel Alsthom (October 18, 1996)
European Telecommunications Quarterly, Fourth Quarter 1996 (October 10, 1996)
Alcatel Alsthom (October 3, 1996)
Portugal Telecom (September 24, 1996)
SPT (September 12, 1996)

The Swedish telecommunications market is arguably the most competitive in Europe, if not the world. Telia, despite a history of state ownership, has proven highly responsive to the challenges which the liberalised environment has brought. Today, Telia has extremely well balanced tariffs, a healthy level of efficiency and a highly successful history of product innovation. Revenue growth in the face of competition has been impressive. Management has reduced staffing levels and has attempted a strategic realignment of the business. The shift in thinking has been based on products, clients and international strategy. This strategic repositioning has driven Telia further up the value chain, through the provision of more value-added services to more focused sets of consumers. In addition, there has been a greater focus on international investments, principally in the Nordic region and in the Unisource global carrier alliance.

Such a strategy is not without risks, however. The shift in strategic positioning domestically will inevitably push Telia into markets which challenge management and require additional funding. The international push demands careful screening of projects and, in public equity markets, could be greeted with caution by investors. Investments in multimedia and other value-added services will consume capital without immediate payback. Growing competitive pressures in the PSTN in Sweden arguably dictate such a strategy of realignment, providing the core business of Telia with a stiff challenge during a time of change.

Telia has shown it has the appetite for change and the ability to compete. We believe the competitive challenge in Sweden leaves Telia well positioned for EU liberalisation in telecommunications in 1998 and well placed to exploit the opportunities the opening of the markets should bring. We note that, with the possible exception of British Telecom (Market Performer, 377p), no other European company has been so exposed to competition across such a wide spectrum of services and, simultaneously, more able to take advantage of the opportunities created by the upcoming liberalisation of European telecommunications markets. Telia's status as a state-owned company has not, in the past, prevented such development; but the heavy cost of exploiting these market opportunities might call for new funding strategies to take advantage of them.

Iain M. Johnston (44-171) 325-5056 (johnston_iain@jpmorgan.com)
Jonathan Adams (44-171) 325-4900 (adams_jonathan@jpmorgan.com)
Sean Faughnan (44-171) 325-4877 (faughnan_sean@jpmorgan.com)
Nick Delfas (44-171) 325-4779 (delfas_nicholas@jpmorgan.com)

TABLE OF CONTENTS

Investment Thesis

Positives

Telia Operates in a Highly Competitive Environment — and Wins
Despite ferocious competition in a highly liberalised environment, Telia has been able to increase revenues in the face of stiff competition, diversifying income and profit streams and reducing its dependence upon Swedish earnings.

The Company Has Well Balanced Tariffs
Importantly, in the face of growing competitive pressures, Telia has well balanced tariffs, with only local call charges appearing significantly out of line with the best balanced of the European operators. The existing tariff structures suggest that substantial inroads by new entrants into the market share of Telia could take place only if tariffs fell, which in turn would limit the returns available to new entrants.

Efficiency Is Set to Improve
The company is at present well positioned with respect to its efficiency compared with its European peer group. Telia management has taken hard decisions on staffing levels and we believe it could become one of the most profitable of all the European operators, should it be prepared to reduce staffing levels to the level of the best RBOCs in the United States.

International Investment Is Highly Focused
Telia has a strategy which places a premium on growing revenues outside the Swedish market. As one of Europe's most efficient and lowest-cost service providers, Telia has matched these attributes with international, demand-led investments heavily focused upon the Nordic region, as well as making further international investments in co-operation with individual parties in the Unisource consortium or with the whole consortium.

Unisource Is a Long-Term Winner
Telia's strategy emphasises developing its international business: it is one of the founding partners of the Unisource consortium, alongside KPN (Market Performer, Dfl 64.8), Swiss Telecom and Telefónica de España (BUY, Pta 2,880). Unisource is aligned with AT&T (Market Performer, $37.75) and is one of only two international carrier consortia emerging strongly within Continental Europe.

Risks

Economic Growth Is Volatile
In the current year Swedish GDP should, on our forecasts, grow by a real 1.8% and in 1997 we project real GDP growth of 2.4%. However, Swedish economic growth has been volatile and any slowdown in economic activity might have negative implications for volume and line growth.

Competition Should Intensify, Depressing Revenue Growth and Increasing Risks
Despite the fiercely competitive nature of the Swedish telecommunications market, new competition continues to develop in all product areas, including the highly penetrated cellular market. We believe that, in addition to lowering the already low tariffs in the sector, more competition will result in an acceleration of corporate strategy. International investments and a shift up the value curve will increase the risk profile of the company.

J.P. Morgan Securities Ltd. – Equity Research
Iain M. Johnston (44-171) 325-5056 (johnston_iain@jpmorgan.com)
Jonathan Adams (44-171) 325-4900 (adams_jonathan@jpmorgan.com)
Sean Faughnan (44-171) 325-4877 (faughnan_sean@jpmorgan.com)
Nick Delfas (44-171) 325-4779 (delfas_nicholas@jpmorgan.com)

Operating Cash Flow Does not Cover Capital Expenditure

A consequence of a more ambitious international investment diversification strategy and a shift into new multimedia products will be higher capital expenditure and investment levels. On existing projections, Telia will add to net debt levels in the remaining years of the decade.

Strategy

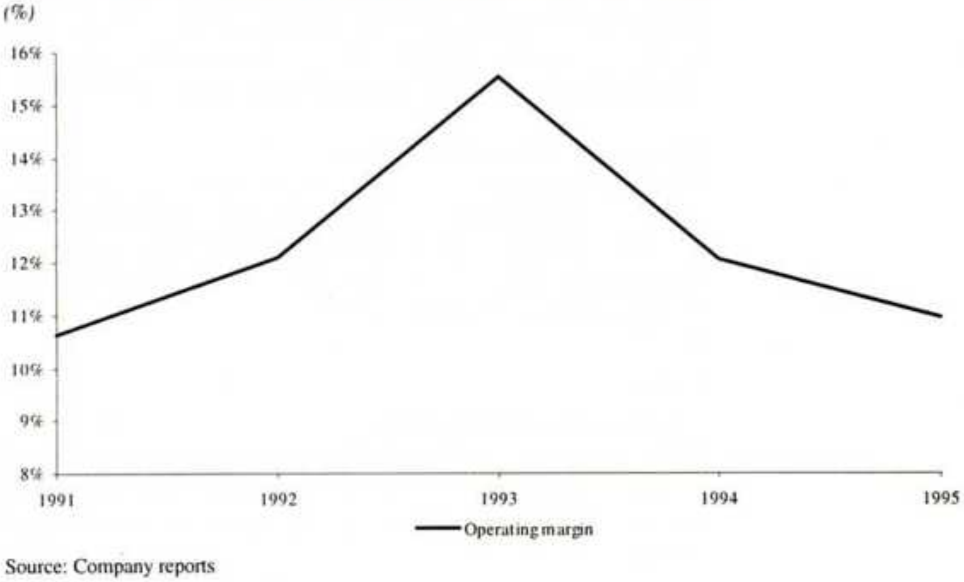
Sweden — a highly liberalised and competitive marketplace

Telia has faced a substantial threat to its traditional sources of revenues as the Swedish telecommunications market has been progressively liberalised. With the introduction of the Telecommunications Act of 1993, Sweden has become arguably the most liberalised market for telecommunications services in the world. Telia has assumed that, before the end of the decade, this liberalisation process will have resulted in a substantial market share loss. In the more readily defensible PSTN, this loss could be up to 15%; but market share losses in long-distance services could exceed 40%, according to company projections. We regard these estimates as entirely plausible, based on the experience of the U.K. and U.S. telecommunications markets.

Competition has, if anything, grown in the Swedish market. We note that the operating margin of Telia reflected the introduction of competition in all areas in 1993, although operating revenues have jumped despite the swifter price declines as competition has taken root.

Telia's operating margins peaked in 1993 but have declined as competition has grown

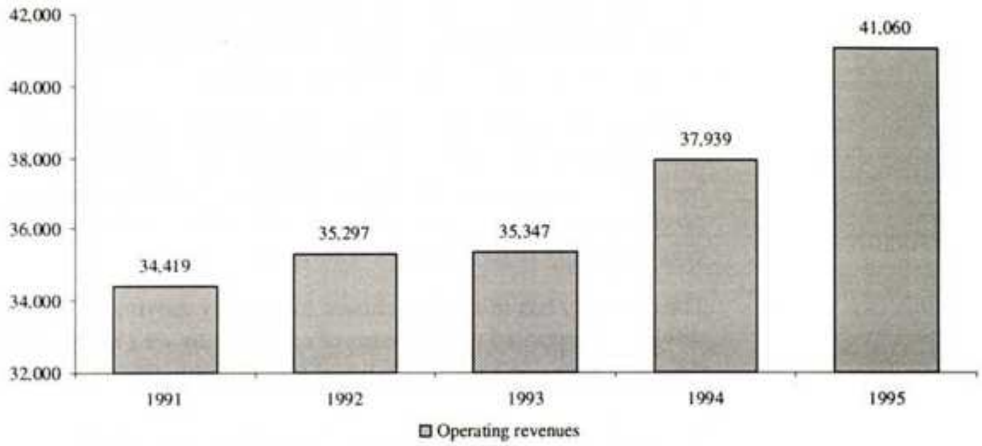
Chart 1: Telia's Operating Margin Has Reflected Competition ...



Source: Company reports

Chart 2: ...While Revenues Have Been More Resilient

(Skr million)



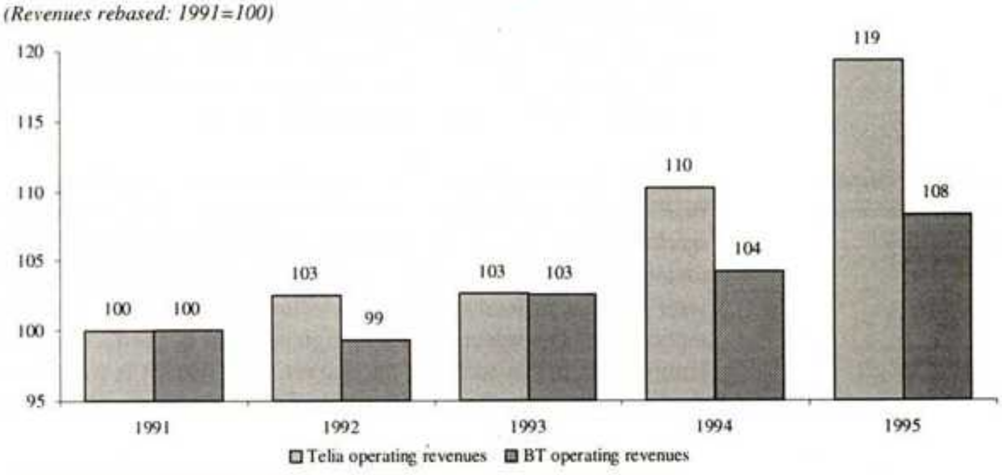
Source: Company reports

The improvement in revenues at Telia over the past two years reflects, we believe, the successful positioning of the company within a more competitive environment. It is interesting to note the differing growth rates of Telia and British Telecom; both companies are operating in highly competitive environments and both are facing significant tariff pressures. As can be seen in Chart 3, Telia's revenue growth has been the more impressive.

Chart 3: Telia and BT: Revenue Growth Compared

Despite competition, Telia has outperformed BT in terms of revenue growth

(Revenues rebased: 1991=100)



Source: Company reports; BT figures are for March of the following year.

This achievement of increasing revenues should be understood in the context of the competitive situation. As noted in the 1995 Annual Report:

"Since July 1, 1993, Sweden has been the most deregulated market....in 1995, competition intensified strikingly, as numerous foreign operators entered the Swedish market...The Swedish government's conducted procurement for government telephony services, putting further pressure on prices... also resulted in a loss of volume when another, non-Swedish telephone company was approved...as a supplier to government organisations".

Iain M. Johnston (44-171) 325-5056 (johnston_iain@jpmorgan.com)
Jonathan Adams (44-171) 325-4900 (adams_jonathan@jpmorgan.com)
Sean Faughnan (44-171) 325-4877 (faughnan_sean@jpmorgan.com)
Nick Delfas (44-171) 325-4779 (delfas_nicholas@jpmorgan.com)

The challenge for Telia's management has been how to deal with the impact of competition while managing the risks associated with expansion. The response to date — based at least on revenue growth — has been successful. Nevertheless, management clearly feels compelled to continue with the process. The company has a very explicit corporate strategy, clearly enunciated in the 1995 Annual Report:

"To offset Telia's inevitable loss of market shares and profitability in its traditional domestic telephone operations in Sweden, it was decided to innovate and broaden the business focus....the new business objectives entail investment in the field of information services....our new business objectives also entail the spread of our operations geographically beyond Sweden's borders"

The company has in essence chosen to grow by moving up the value chain (provision of services, as opposed to the means of carriage), as well as by diversifying geographical risk through expansion into international telecommunications markets.

Moving Up the Value Chain: What Does it Entail?

We would describe Telia's strategy as being composed of increasing the value-added component of services; investing in the field of information services; and targeting the appropriate customer base for these services.

To compete, Telia wants to add more value to basic services ...

Telia has already been examining the target market and reorganising itself to ensure the client base is correctly addressed. Telia has identified, first and foremost, the large multinationals and Swedish domestic accounts which generate substantial amounts of high-value international voice and data streams. As outlined below, we believe that the Unisource stake represents a crucial element of this strategy. The reorganisation of the group in 1995 placed Telia Megacom, the marketing unit responsible for sales and service to large corporations (including distribution of the Unisource product), firmly at the centre of the marketing effort. In 1995, Telia Megacom grew sales by 8% to Skr 4,346 million; this represented 10.6% of all revenues at Telia.

... and service certain business groups more intensely

Second, Telia has chosen to focus on the needs of a largely ignored group of subscribers: municipalities, government entities and medium-sized companies. Telia PubliCom is the marketing unit responsible for the municipal governments and municipalities; this market is undoubtedly growing more competitive. Global One has recently been selected, together with Telia, as official supplier of telecoms services to the Swedish administrations and local authorities. The selection of a foreign operator is a reflection of the intense level of competition in this sector of the market. The market is worth an estimated $1.8 billion in the five next years. Telia Företag is responsible for the medium-sized corporate market.

Content provision is arguably the most contentious of the areas management is seeking to pursue. In the 1995 annual report, the company highlighted areas such as on-line shopping, interactive education, games and entertainment. The unit most directly responsible, Telia Infomedia, has been active with a number of deals recently concluded. These include:

- Telia Infomedia and Sveriges Television are planning to launch a new pay-TV channel called Guldkanalen at end the of 1996. The channel will initially be broadcast via Telia Kabel-TV but is also intended for distribution via other Swedish cable networks. From spring 1997 it will be available as a satellite channel. Guldkanalen will show programmes from STV's archives. Telia is also considering an investment in digital TV.

At the end the of 1996, to coincide with the pay-TV launch, Telia will trial an interactive TV network in Malmö.

- Telia recently acquired a three-year right to international hockey, through its media subsidiary Telia InfoMedia.

Investors have mixed views about such investments. The doubts centre around the cost of acquisitions and the ill-defined nature of the content market. Inevitably, concerns develop about the provision of software and the nature of the entertainment market: the ability to retain and attract talent, the costs associated with it and the pipeline of new performers. To date, we note few operators have made a convincing entry into the provision of entertainment services and other product offerings, such as home banking, appear relatively distant.

The government may not approve of a shift towards content provision

There is some evidence that the government is growing more hostile to the proposed shift up the "value curve" by Telia. According to the Ministry of Transport and Communications memorandum, "Modern Telecommunications for All", the owner (the government) argues that Telia should not become involved in the production of material to be transmitted via its telecommunications or cable television networks. This ban includes co-operation on production with media companies. The report argues that Telia lacks the know-how to become a media group and that its plans to invest Skr 1.2 billion a year in new multimedia ventures represent a considerable financial risk. The memorandum goes on to note that, should Telia insist on the right to broadcast video films to households via its networks, it would have to agree to make those networks available to other players. In a broader context, the policy may result in Telia abandoning part of its planned Skr 6 billion investment in new media.

International: Rewards and Risks

The move into international ventures has been pursued through a four-pronged strategy:

- First, the acquisition of the 25% stake in the global carrier alliance, Unisource. We believe that, in the long term, Unisource represents not only a defensive move but that it could add substantial value to the group;

Telia has a focused approach to international investments

- Second, the targeting of the Nordic and Baltic markets in particular for expansion, especially in the cellular, international wireline and corporate markets. Telia has generally built greenfield networks in the Nordic countries (such as broadband linkage of capital cities), while it has pursued an acquisition/joint venture approach in the Baltic countries and Poland;

- Third, the acquisition of strategic stakes in an opportunistic fashion in other companies, such as GSM operators in emerging markets (e.g. JT Mobiles in Southern India). This strategy is pursued principally through Telia Overseas, an entity which is 65%-owned by Telia and 35% by other Swedish institutions;

- Fourth, the acquisition of holdings in telecommunications companies through the Unisource partnership or in co-operation with certain members of the group — as was the case in the recent acquisition of a stake in Telecom Eireann with KPN as a fellow strategic investor. This approach is inherently more opportunistic but has the added advantage of enabling Telia to leverage other companies' balance sheets.

Telia has chosen to focus international investments outside Europe largely, although not exclusively, on mobile.

J.P. Morgan Securities Ltd. – Equity Research
Iain M. Johnston (44-171) 325-5056 (johnston_iain@jpmorgan.com)
Jonathan Adams (44-171) 325-4900 (adams_jonathan@jpmorgan.com)
Sean Faughnan (44-171) 325-4877 (faughnan_sean@jpmorgan.com)
Nick Delfas (44-171) 325-4779 (delfas_nicholas@jpmorgan.com)

Do Equity Investors Value International Acquisitions?

We believe that there are few European telecommunications companies that have benefited (in a valuation context) from their international investments. We would divide the European carriers into two groups: those with a proven track record in overseas investments and those with largely unfulfilled international aspirations.

Those Which Have Benefited...

The companies that we believe have succeeded in developing a coherent international acquisition strategy are British Telecom, Telefónica de España and Vodafone (BUY, 249p). **British Telecom** had confined substantial international investment to the United States until recently with its 20% investment in MCI (Market Performer, $30) and previously in McCaw Cellular. Announcements from the company through the summer of this year, such as the alliance with the Dutch Railways and with Générale des Eaux in France, began to suggest a coherent European strategy of seeking to compete with existing monopoly operators after deregulation in 1998. These developments were then followed by the proposal for a full merger between BT and MCI to create Concert plc, the world's first fully integrated global carrier. However, the BT share price has not risen significantly since the announcement, and the stock continues to be the highest yielding European carrier, suggesting that investors do not yet attach much value to the international assets. **Telefónica de España** has a significant range of assets, mostly in Latin America, through its international subsidiary, TISA. However, we believe that full value is unlikely to be accorded to these diverse assets until TISA is listed — or a strategic stake is taken in the company. **Vodafone**, as with Telefónica, has a highly focused approach to investment but similarly has chosen not to create shareholder value through the listing of international cellular assets. We estimate that these could be worth in excess of $3.5 billion.

... And Those Which Have Not

The rest of the European telecommunications operators have, by and large, failed to achieve a significant portfolio of international assets. **Tele Danmark** (Market Performer, Dkr 296) has a significant cash position and a 16.5% interest in Belgacom. However, shareholders have viewed international investments as mildly negative and would appear to prefer to see the cash returned to them. Of the other European operators, we would argue that the investments of **KPN** and **STET** (BUY, Lit 6,469) have actually hurt their share price prospects.

What Are the Crucial Investor Concerns?

Put simply, we would highlight these as:

- **The possibility of longer-term payback on international acquisitions**. This development is particularly true for emerging market or greenfield investments;
- **The danger of creating a holding company structure**, with a discount to underlying assets. The most obvious, and exaggerated, examples of this are at Cable & Wireless and STET, where the value of the quoted assets often exceeds the value of the holding company; unquoted assets often appear to have negative valuations;
- **The lack of focus in international investments**, which is a subjective criticism; but undoubtedly the companies with a strong geographical or product focus in international investments typically enjoy a better reputation among investors.

The company recognises that international diversification can raise the risk profile

Telia, while it remains in the government domain, will clearly seek to reduce the risks associated with its international investments but we believe the company would be forced to be equally judicious in its investment strategy were it to be listed. As the annual report succinctly puts it:

"The new business objectives....constitute a calculated increase in risk taken on by Telia. To manage these risks, we are seeking partners and allies among enterprises in the field of information media, we welcome financial partners in Telia Overseas, we are collaborating with our allies and AT&T in Unisource, and we are building our client base before infrastructure in new markets".

REGULATION

Telia has not had the benefit of a statutory monopoly in recent history and in this respect has never appeared in the same light as other telecommunications carriers in Europe. Postal and telecommunications services have been provided by separate entities, unlike a number of other European PTTs. The modern regulatory age dawned upon Telia in July 1993 with the passing of the 1993 Telecommunications Law. This act provided statutory powers to the National Telecommunications Authority (PTS), created in July 1992. The PTS's powers include the following: type approval, licence awards and number planning.

Sweden is following the European Union's aim of Open Network Provision, although in many areas Sweden has run far in advance of the EU's proposals.

Unlike much of the EU, Sweden has a competitive telecoms environment

Table 1: Sweden Has an Open Telecommunications Market

Service/Products	European Union, Ex-U.K./Denmark/Finland	Sweden
Terminals	Free market	Free market
Telephony services	Monopoly	Free market
Third-party telephony traffic	Prohibited/restricted	Free market
Data communications services	Free market in 1996	Free market
Third-party data communications services	Free market in 1996	Free market
Value-added services	Free market	Free market
VSAT	Limited freedom	Free market
Mobile telephony	Monopoly/duopoly	Free market
Network construction	Limited freedom	Free market
CATV	Geographical monopolies	Free market
Regulatory independence from operator	Implemented	Implemented

Source: J.P. Morgan

The PTS has been headed since its inception by Jan Freese, the Director General. He has been a largely non-confrontational regulator (arguably unlike his U.K. counterpart) and is to be in charge of the deregulation of the Swedish telecommunications market ahead of EU liberalisation in 1998, according to a recent memorandum from the Ministry of Transport and Communications entitled "Modern Telecommunications for All". **The formal legal framework for the new environment should be established in July 1997.**

The PTS has been empowered to decide the terms of network agreements between telecoms operators and their competitors. The PTS will also have the right to demand changes to existing contracts and to standard rates, with retroactive effect. In addition, the PTS will be able to set time limits for negotiations and to decide upon prices in the event that mediation between parties does not lead to agreement within six months. However, the cost share model on which pricing is to be based is currently being reviewed; the PTS is to submit a proposal to the government by November 1, 1996. The proposed prices must ensure a reasonable return on capital employed and include write-downs. It is also proposed that the existing agreement between Telia and the state on universal service be extended to July 1997 but be allowed to expire after that date. This means that, in the long term, telephone calls may become more expensive in sparsely populated rural areas, while prices in urban areas may fall.

The PTS is at present primarily responsible for tariff supervision and interconnection mediation. Tariffs were originally handled by the Ministry of Transport and Communications but in 1992 Telia was allowed to set tariffs subject to a price cap. This cap was set at 70% of CPI although, following the prospect of cuts in Telia's capital expenditure as well as the threat to cut staff numbers aggressively, the government concluded an RPI-1% formula might be more palatable. The basket covers only a limited number of services: residential subscribers and business subscribers with only one line.

Iain M. Johnston (44-171) 325-5056 (johnston_iain@jpmorgan.com)
Jonathan Adams (44-171) 325-4900 (adams_jonathan@jpmorgan.com)
Sean Faughnan (44-171) 325-4877 (faughnan_sean@jpmorgan.com)
Nick Delfas (44-171) 325-4779 (delfas_nicholas@jpmorgan.com)

Tariff Rebalancing Is Critical to Success

A crucial element in the ability of Telia to compete effectively in wireline in the future is the ability to rebalance tariffs. The company is able, under the framework of the overall price cap, to rebalance. This rebalancing process is particularly important as Telia is compensated neither by the government, nor through interconnect with other network operators, for its universal service obligation. Since 1992 Telia has chosen to utilise some, albeit not all, of the rebalancing potential under the existing price cap.

We believe that Telia has relatively well balanced tariffs, which should assist the company as competition grows.

Telia has relatively well balanced tariffs

Table 2: Tariffs by Category

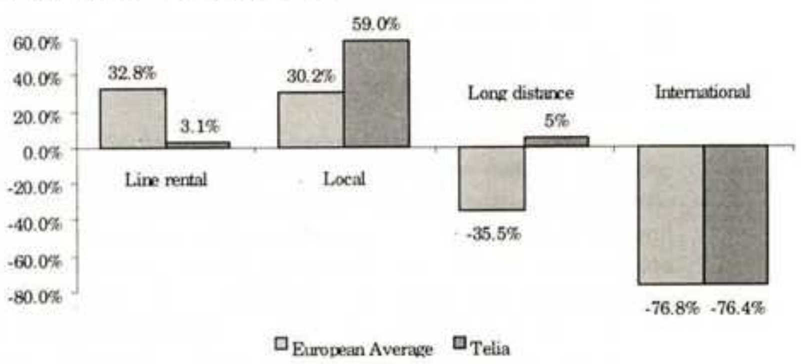
($)

	Line Rental per Month	Local Calls per Minute	Regional per Minute	Long-Distance per Minute	International per Minute
Target tariffs	*15.00*	*0.05*	*0.08*	*0.10*	*0.15*
Tele Danmark	13.63	0.04	0.06	0.09	0.63
BT	12.63	0.04	-	0.06	0.43
KPN	13.54	0.03	-	0.09	0.73
France Telecom	8.62	0.04	-	0.14	0.72
Telecom Finland	8.63	0.04	-	0.11	0.63
Telecom Italia	8.46	0.06	-	0.20	0.74
Telefónica de España	9.60	0.03	0.13	0.29	0.72
Telia	**14.50**	**0.03**	**0.07**	**0.09**	**0.63**
Portugal Telecom	9.77	0.02	0.09	0.27	0.94
Belgacom	14.34	0.04	-	0.21	0.70

Source: Tarifica, J.P. Morgan estimates.
Telecom Italia (Lit 3,585, Market Performer) and Portugal Telecom (Esc 4,120, Market Performer).

Chart 4: Telia's Long-Distance Tariffs Are Already at Fully Competitive Levels

(% change required to reach target tariffs)



Source: Tarifica, J.P. Morgan estimates

As can be seen in Table 2, we would regard Telia as comparable with the best balanced European operators. Our own price targets for tariffs in a fully liberalised market are $15 per month in line rental, $0.05 per minute for local loop traffic, $0.10 per minute for domestic long-distance and $0.15 per minute for international calls. The international call tariff in our own model is clearly far below prevailing calling rates but reflects, we believe, the underlying cost of the service.

Telia has tariffs levels close to those we consider appropriate in a free market in nearly every area, as well as the lowest international prices in the European peer group. Only local loop prices appear lower than the implied free market level, although this price should be viewed in association with Telia's regional tariffs. We believe that, in the long term, Telia should be able to exploit the better balanced tariffs by taking advantage of its competitive position in Europe as the liberalisation of the sector occurs in 1998. We note, however, that the company expects price pressures in the domestic market to continue to grow.

UNISOURCE

The Logic of Unisource

Unisource is a crucial element in the international diversification strategy

The history of Unisource stretches back to 1991, when the first tentative steps were taken towards its creation with a decision by Telia (then named Televerket) and PTT Telecoms of the Netherlands to strengthen their positions in the European market through co-operation. The two countries had much in common from a telegeographical point of view; both had a relatively small domestic subscriber base but a disproportionate volume of traffic generated from large multinational carriers. The prospects were enticing: a partnership could lower costs, bolster marketing and represented in part a defensive strategy and in part a way of winning a larger slice of cross-border traffic flows. As noted in the 1991 Annual Report, at the time of the original transaction:

"...although major companies in Sweden will be targeted first, more extensive campaigns aimed at capturing about 20% of the European market for such services are planned".

Since its inception, PTT Switzerland and Telefónica de España have joined the consortium, with each equity partner having a full 25% equity stake. In the intervening period, Unisource invested in a 20% equity stake in WorldPartners, a consortium of AT&T, Singapore Telecom (S$3.3, Market Performer) and KDD. Unisource, as a result, distributes the WorldPartners product in Europe. Unisource, through its alliance with WorldPartners, has access to the crucial Asian market — a differentiating factor for Unisource members. The objectives of Telia have not changed as a result of the development of Unisource:

"...to be positioned, well in advance of 1998, as the leading supplier of pan-European communication services with global reach" (Annual Report, 1995).

We believe that Telia's strategy is likely to remain in place and that the commitment to Unisource will only grow:

1. As the domestic market revenue base comes under competitive pressure, Telia can offset revenue losses domestically with the revenue stream from international ventures. Given its experience in a highly competitive environment, Telia is better placed to exploit liberalisation in the EU after 1998 and can target the most profitable customer base through Unisource;

2. Unisource and its partners represent a potentially low-cost entry into international acquisitions (with Telia contributing only 25% of the cost).

3. Should domestic expansion into the provision of content be limited by the government, Telia would be more dependent upon international growth; Unisource remains, despite other investments, the largest in terms of capital commitment; in addition, the president of Telia, Lars Berg, has recently taken over responsibility for foreign operations, indicating the importance management attaches to this side of the business.

J.P. Morgan Securities Ltd. – Equity Research
Iain M. Johnston (44-171) 325-5056 (johnston_iain@jpmorgan.com)
Jonathan Adams (44-171) 325-4900 (adams_jonathan@jpmorgan.com)
Sean Faughnan (44-171) 325-4877 (faughnan_sean@jpmorgan.com)
Nick Delfas (44-171) 325-4779 (delfas_nicholas@jpmorgan.com)

Telia Should Be a Winner in Europe

Continental Europe is gradually liberalising to become a competitive marketplace, with high stakes to play for. We consider that Telia is well placed to benefit from this process for the following reasons:

Telia's competitive strengths add value in a competitive European market

- **Telia has proven cost benefits**. Among European operators Telia has healthy productivity and one of the lowest and best balanced tariff structures; it is also far down the road in restructuring its organisation for the competitive marketplace. In addition to their inferior productivity and financial position, many of its major peers in the region have issues of cost structure;
- **Telia is internationally orientated**. Swedish multinationals are present throughout Europe and this should help Telia to penetrate individual country markets. Management attention at many of the other European operators is likely to be increasingly focused upon the need to restructure domestic operations;
- **Telia already has a strong web of alliances**. Telia and Unisource are already better placed in terms of geographical coverage of the European market than any other competitor. The members of Unisource directly cover Sweden, the Netherlands, Switzerland and Spain. In addition, Unisource is in the process of completing alliances in Germany and France. Unisource is also allied with AT&T in WorldSource Partners, the largest of the global alliances, and more directly in the European market through Uniworld.

BT/MCI: What Concert Means to Unisource

The proposed merger of BT and MCI has dramatically altered the competitive landscape for the global carrier alliances.

Why Is BT Doing the Deal?

We believe that there are a number of reasons why BT is choosing to enter into this transaction, many of which relate to BT's particular situation in the U.K. market:

- **It reduces the exposure of BT to U.K. regulated earnings**. While a more attractive but by no means generous price cap was accepted in the summer, relations with the regulator remain strained. The formation of Cable and Wireless Communications and the liberalisation of international services from July of this year has further increased the level of competition.
- **EPS growth should benefit**. We are projecting EPS growth for BT after payment of the special dividend at 2.7% between 1996-2000, but between 11% and 13% in the same period for MCI.
- **BT needed to adjust its capital structure**. In our view BT was over-capitalised compared with the European peer group.

The creation of Concert plc would produce a new world order

- **MCI adds marketing expertise.** With a full merger of both companies U.K. consumers will get more services, more aggressively marketed, than before.
- **The merger should enable BT to cut costs**. BT estimates that up to £500 million in enhanced revenues and savings will be made annually within five years.

- **BT gets access to the equity of News Corporation**. MCI holds 13.5% of News Corporation and has potential access to the video and software library.
- **It creates a player of global reach**, the fourth-largest telco globally in sales terms and second-largest in market capitalisation.

What Are the Risks for BT Shareholders?
We identify five risks for the BT shareholders:

1. The U.S. telecommunications market is highly competitive and in a state of flux;
2. Long term the company will become less of a dividend yield story;
3. While the company may become the most global of the telcos, it still has no leg in the rapidly growing Asian marketplace;
4. Capex may come under pressure, increasing competitive risks in the U.K. market in particular;
5. BT is betting heavily on size and critical mass. At present, we believe that the concept of a global carrier is just that: a concept.

What Does it Do to the European Marketplace?
First, we believe both Unisource and Global One are weakened, as they are unable to participate in the U.S. market in the same way as BT (given the limited access of U.S. firms to the European markets).

Concert plc could weaken the position of Unisource

Second, rationalisation in Europe is possible but on balance unlikely. Unless member countries from the EU change their telecommunications policies dramatically, we doubt if continental carriers will play a major role in the U.S. market. As the carriers are typically owned at least in part by the state, the merger of European carriers is technically difficult. Unisource members will no doubt re-examine the relationship with AT&T through the WorldPartners Alliance.

Third, companies or joint ventures in Europe associated with BT should benefit. BT has close links in particular to Viag and Compagnie Générale des Eaux and these companies should benefit from the close association with Concert, strengthening the position of the joint ventures in the respective countries. The deal should also enhance the position of the Telenordia venture in the Nordic region.

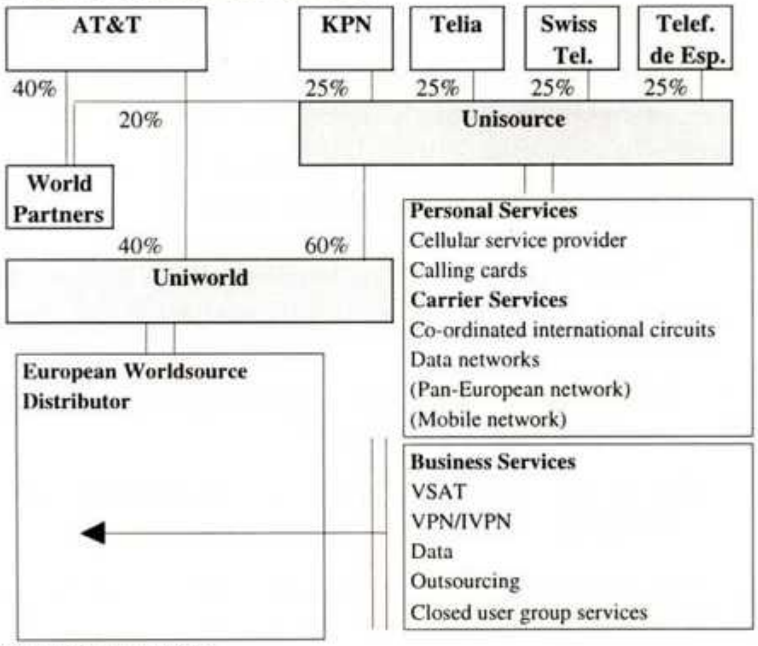
Unisource: Creating Value for its Shareholders

Unisource is both a defensive posture ...

Why Unisource Is Important to Telia
Although we expect Unisource to produce a good financial return for its shareholders, its greater importance is to help them to avoid the worst problems of competition. We expect Uniworld and Concert to become the leading international service providers to large businesses in Europe. Telia, with a home base containing many multinational corporations, was arguably vulnerable to the development of international service provision. For example, Unilever (Market Performer, Dfl 298.6), a major account, had transferred business to Concert away from Telia's partner KPN; more recently, however, the account has been won back through Unisource.

Iain M. Johnston (44-171) 325-5056 (johnston_iain@jpmorgan.com)
Jonathan Adams (44-171) 325-4900 (adams_jonathan@jpmorgan.com)
Sean Faughnan (44-171) 325-4877 (faughnan_sean@jpmorgan.com)
Nick Delfas (44-171) 325-4779 (delfas_nicholas@jpmorgan.com)

Chart 5: Structure of Unisource



Source: Company reports

Unisource's Strategy Should Maximise Profit

Unisource gives customers a single point of contact for the most comprehensive set of telecommunications services on a pan-European basis. We expect Unisource to continue to build out its network to become fully pan-European for voice and data services. At the same time, it may focus on wireless services through satellite and mobile telephony. In the longer term, we anticipate that it will take over all the international cable, data and mobile assets of its shareholders, as well as the Infonet assets in Europe.

We believe that there are five key reasons why Unisource's strategy will make it a winner:

... as well as a company designed to win new business

1. **The Pan-European Approach Is a Major Winner**
   The local PTT in each country dominates the outgoing international call stream and the delivery of incoming calls, so that it is responsible for half of each outgoing and incoming call. Some parts of this extremely valuable traffic flow are already beginning to become a competitive market with the increase in liberalised services, data services and value-added services, more sophisticated forms of callback and the closed user-group market. Nevertheless, these developments are still only scratching the surface. From the beginning of 1998, the whole market will be liberalised and there are likely to be few operators in a position to address the new market. Unisource will be one of those.

2. **The New Market Should Be One of the Most Profitable of All Telecommunications Services.**
   International call prices are still significantly out of line with their cost, supported by the anachronistic international settlement system and the old oligopoly system. Although we expect international prices to fall, they are not likely to reach the level that we believe is appropriate in a totally free market for many years to come. The average intra-European call price is about $0.50 per minute. We estimate that the price in a free market could be below $0.15 per minute, so that there is an additional 70% profit margin from prices being out of line.

3. Cross-Border Services for Business Customers Are the Achilles' Heel of the PTTs
International traffic has been one of the most rapidly growing areas in telecommunications for the last decade or more. The PTTs have become less able to cater for the needs of their business customers because they control only half of the line involved in a call; the other half belong to the PTT in the correspondent country. Services have been essentially limited to basic voice dial-up lines, leased lines and slow-speed data applications. At the same time, prices for international services are far higher than cost, with no guarantees of reliability and business customers have had to deal with each of the PTTs separately.

Against this backdrop, many businesses have developed their own networks for faster movement of data, LAN interconnection and more advanced telecommunications services, such as international conferencing and video conferencing. However, companies are now increasingly going to outside suppliers where they can guarantee the quality and price of the service. In some cases, this goes as far as complete outsourcing of telecommunications needs.

Unisource, through Uniworld, is one of the leading suppliers of this type of service. Companies like **Uniworld can offer major business customers huge advantages compared with developing in-house resources**:

- Such suppliers can be more flexible and develop their services in line with the most advanced technology, while individual companies do not have the scale to upgrade technology;
- they can spread the overhead of managing a network over a larger business;
- telecommunications is their core business, while it is not for most of their customers;
- they can achieve economies of scale in buying international capacity and shared capacity through international virtual private network services.

4. Calling Cards Give Early Entry to the International Traffic Markets
The international calling card business is growing rapidly and offers further potential. Using local free telephone numbers, customers can obtain better service and often lower prices than through the local PTT. These services include payment later on account and 24-hour operator assistance in your own language. Prices for calls can be lower than the normal PTT prices and are considerably cheaper than those charged by most hotels for international calls.

The calling card business allows Unisource to take a slice of the international switched voice market ahead of liberalisation at the beginning of 1998. Calling card services have been liberalised as 'value-added' services throughout the EU. Most operators haul the traffic back to their home country and then switch it out to the calling destination, so that they pay international settlement rates on the delivery of the call to most countries. However, these costs will be reduced to a simple local access charge in the liberalised markets after the beginning of 1998, making the cards even more cost-competitive than they are today. Countries that do not liberalise may become more vulnerable.

5. Mobile Is the Long-Term, Low-Cost Approach for Personal Customers
Unisource's focus on mobile service provision and managing licences is the low-cost approach to the personal market. In addition, international calls by mobile are set to be liberalised ahead of the rest of the switched voice market, probably in 1997. In the first instance, we anticipate that Unisource will focus on service provision as a way to grow its

Iain M. Johnston (44-171) 325-5056 (johnston_iain@jpmorgan.com)
Jonathan Adams (44-171) 325-4900 (adams_jonathan@jpmorgan.com)
Sean Faughnan (44-171) 325-4877 (faughnan_sean@jpmorgan.com)
Nick Delfas (44-171) 325-4779 (delfas_nicholas@jpmorgan.com)

customer base rapidly. With high margins in the cellular business, we expect the role of service provider to become increasingly valuable, since the providers control the customers. Mobile has already become the low-cost option, despite the relative immaturity of the business. Telecom Italia Mobile's (BUY, Lit 3,545) gross capital invested per line is about 35% the level of its fixed-line sister's. Operating costs are also attractive, highlighted by the comparable productivity, which is up to four times as high in the mobile business as in the fixed-wire business. We expect these comparisons to favour mobile more as the number of subscribers grows.

6. Unisource's Key Costs Are Set to Fall

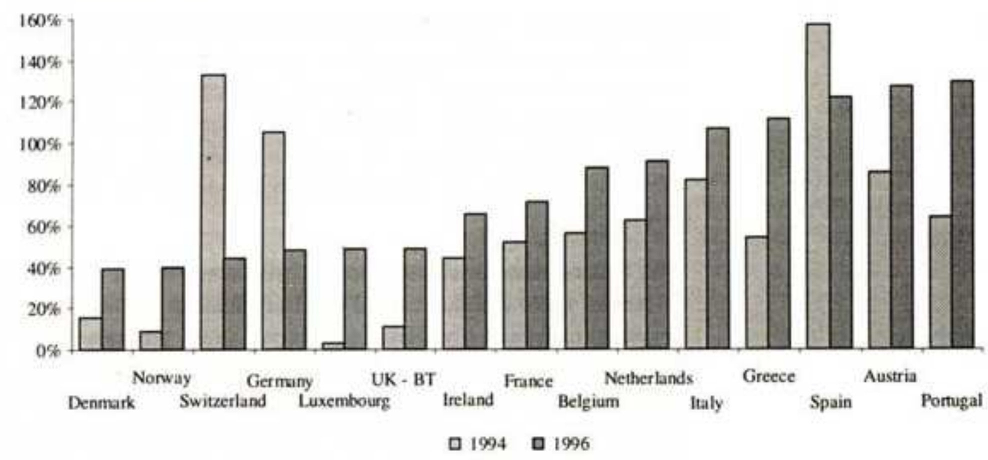
We anticipate that large components of Unisource's costs will fall sharply over the next few years. Direct costs, largely leased lines, interconnection and international settlement related to European countries account for 57% of Unisource's operating expenses. We believe that prices for all of these items will fall sharply over the next few years.

Both international and domestic leased-line prices in Europe are set to fall dramatically. International 2 MBit leased line prices throughout Europe are up to 10 times the level that we view as appropriate to a free market, while domestic long-distance leased-line prices are two to four times free market levels. With competition coming to the market, we expect to see convergence in these prices. If competition does not force prices lower, then the EU is likely to do so. In 1996, the operators nearest to Telia in price for domestic leased lines were almost 40% more expensive.

Telia has among the lowest leased line prices in the world

Chart 6: Comparative Domestic Leased Line Costs in Europe

(% difference from Telia prices)



Source: Tarifica

The cost of international interconnection for delivering calls should fall with liberalisation. Most international calls delivered through the switched network have to be delivered through international settlement because local interconnection is not yet available in unliberalised markets. The price of international settlement is about half a full international call price, so about $0.25 per minute within Europe. However, we can assume that local call interconnection should not be higher than about $0.05 per minute. We anticipate that the cost of delivering calls internationally should move towards parity with local interconnection rates after 1998. Operating as a consortium, Unisource is arguably in a more powerful position to put pressure on accounting rate settlements.

Telia is pushing for large reductions in accounting rates

Indeed, **Telia has been particularly aggressive on accounting rates**. The company has been demanding accounting rate reductions of up to 80% from carriers in Denmark, Finland, France, Norway and the United Kingdom and threatening operators that failure to comply carries the risk of being bypassed in transit traffic. As Sweden has already opened its market for all services, including international, Telia does not distinguish between domestic and international tariffs. Competitors are capitalising on this situation, as the national interconnect rate charged by Telia is 90% lower than the international accounting rate charged to Telia by carriers in less liberal environments. For example, Telia charges France Telecom the national interconnect rate of Skr 0.23 ($0.04) per minute to connect to its network. However, when Telia connects to France Telecom's network in France, it is charged Skr 1.75 ($0.26) per minute under the traditional accounting system.

Other International Investments

Nordic Region on the Doorstep

Telia believes that the Nordic markets represent an ideal opportunity to pursue geographical diversification, owing to:

- low barriers to entry;
- common economic, linguistic and social ties;
- a client base typically highly responsive to the introduction of new technologies;
- low cost of entry.

The total value of the market is estimated by Telia to be around Skr 150 billion ($23 billion). As the investments in these countries tend to be on a smaller scale (owing to the relatively small market size), Telia has largely pursued an investment strategy without the use of other equity partners. To date, Telia has made, or is considering, the following investments in the Nordic region:

Denmark — Competition for a Mobile Licence and Efforts in the International Sector
Telia is one of nine foreign telecoms operators competing for three new national DCS 1800 licences to be awarded as part of the expansion of Tele Danmark's GSM mobile telephone network, with the three new operators to be appointed in early 1997. Telia Danmark was reportedly considering the acquisition of all or part of the Danish mobile telecommunications company, Sonofon. Telia has previously been involved in discussions with GN Store Nord, which has a 36% stake in Sonofon, although we believe the company is unlikely to pursue a strategy of acquisition in this market.

Telia has focused on Nordic country investments

In addition to its mobile strategy, Telia has been targeting the international call market, for both residential and business subscribers. Since setting up operations in early 1995 Telia has won over 200 corporate customers in the international call sector of the market. By the year 2005, Telia expects to have a 20-30% share of the Danish telecommunications market. To assist efforts in the local loop, in December 1994 Telia acquired 94% of the equity of Stofa A/S, the second largest cable-TV operator in Denmark, with a subscriber base of around 250,000. Telia's marketing emphasises that its call charges are 10% cheaper than those of its competitors, and that all the subscriber needs to do to use the service is dial "1010" before the telephone number he is calling.

Iain M. Johnston (44-171) 325-5056 (johnston_iain@jpmorgan.com)
Jonathan Adams (44-171) 325-4900 (adams_jonathan@jpmorgan.com)
Sean Faughnan (44-171) 325-4877 (faughnan_sean@jpmorgan.com)
Nick Delfas (44-171) 325-4779 (delfas_nicholas@jpmorgan.com)

Finland — Significant Shares of Trunk and International Markets Already

In August 1996 Telia announced plans to buy a 75% stake in electric utility Voima Oy's Telivo Oy telecommunications company, giving the Swedes an instant 10% market share of the Finnish international telephone calls market and a share of slightly more than 4% of its long-distance calls. Telivo has, in addition, a licence to build a DCS 1800 mobile telephone network. No price was disclosed. It has recently been suggested in the Finnish press that Telia may acquire Janco Kabel, a cable network, a division of Helsinki Media. We regard the Finnish market as extremely exciting for Telia:

- The Finnish market is among the most technically advanced in the world, with strong consumer acceptance of new products and services, including Internet usage;
- The market is totally deregulated across all market segments including mobile and data services, as well as domestic and international long-distance services — areas which we believe could be attractive to Telia;
- The local loop market is relatively fragmented, with in excess of 40 local operators and only two — Helsinki Telephone Company and Telecom Finland — of any critical mass;
- The bulk of international call traffic from Finland is destined for Sweden.

Norway — The Corporate Sector

In a period of just one year, Telia's Norwegian workforce has grown from a handful to 130 and the company has taken orders worth Skr 250 million, gaining a 2% share of international calls in the corporate sector. Telia Norge aims for a market share of around 20-30% within the next 10 years, which would give the company a turnover of around Nkr 15 billion.

The Wider World

Telia has made substantial investments in Poland and the Baltic states, where it is concentrating on rebuilding the old infrastructure. The proximity to Sweden has made it easy to export Swedish technology and the infrastructure is now being rebuilt from scratch. In most cases, Telia operates as the minority owner in joint ventures where local companies hold the majority stakes, as the governments of these countries are loath to relinquish control of telecommunications developments within their national borders.

Other global investments are scattered

Telia's other major investments are in Telecom Eireann, GSM operations in Italy and Russia, and the second wireline operator in the Philippines, as well as holdings in the United Kingdom and the United States. The company has recently disposed of its stake in the second Hungarian GSM operator, Pannon, and at the same time has indicated that it is now pursuing a new strategy of holding only majority stakes in its interests in Europe, suggesting that there will be further reorganisation of its European portfolio in the near future.

Table 3: Equity Holdings Outside the Nordic Countries

Investment	Country	Stake	Business
Western Europe			
Telecom Eireann	Ireland		Joint 20% stake with KPN
Omnitel Pronto Italia	Italy	6.8%	GSM Cellular
Eastern Europe			
North West GSM	Russia	12.7%	GSM Cellular, St. Petersburg
Netia Telecom	Poland	25%	Competition with TPSA
LMT	Latvia	24.5%	Mobile Services
Eesti Telefon	Estonia	24.5%	Principal telecommunications provider
Estonian Mobile	Estonia	24.5%	Mobile communications
Americas and Asia			
Infonet	U.S.	17%	Data communications
Local Touch	U.S.	40%	Directory
Digitel	Philippines	10%	Wireline
Otecel	Ecuador	28%	Mobile
JT Mobiles	India	26%	GSM in Karnataka and Andhra Pradesh
Telia Lanka	Sri Lanka	75%	Wireless local loop

Source: Telia

Poland and the Baltic States

Poland

The Polish government abolished state monopolies on telecommunications services in 1991, since when 56 licences have been granted to private operators to build and operate fixed-line telephone networks in various regions throughout Poland. Telia has a 25% stake in Netia Telecom. The remaining shareholders are RPT, a private Polish company (65%), and the EBRD (10%). Financing of $180 million, using the EBRD as a lender of record and with a 10-year maturity, was completed in June 1996 for construction and operation of networks in 10 regions to service about 2.3 million users.

Latvia

There is substantial Baltic state investment

Telia owns 24.5% of LMT, the monopoly provider of mobile communications in Latvia, in which the other shareholders are Telecom Finland and the Latvian State. LMT has both NMT analogue and GSM digital networks. The Latvian government has recently awarded a second licence to BalTel, which is owned by the Latvian Alina company (51%) and the LatCom firm (49%), which includes the American Western Wireless International Corporation and Metro Media International Telecommunication Inc. Telia failed to obtain a stake in the fixed network monopoly Latvian Telecom, a state-owned company with Cable & Wireless and Telecom Finland as minority shareholders.

Estonia

Telecom Finland and Telia jointly bought 49% of Estonian State Telephone for Eek 322 million ($26.4 million) in January 1993, creating the Baltic Telecom Holding Company (BTH). The Finnish-Swedish partners guaranteed investments equal to the selling price and the Estonian state, which maintained a 51% stake in the company, contributed the existing phone network. The group plans to invest approximately Eek 400 million ($34 million) a year to introduce digital systems and build a fibre-optic network between Estonia and Sweden. The Estonian Mobile Phone Company has around 26,000 subscribers. Telia also has a 60% stake in the Estonian cable television company, Starman. Telia has committed itself to investing Eek 28 million into the Estonian operation over the next 18 months and will build a cable TV network covering 50,000 homes. Starman's currently has 11,000 customers and it has been active in Estonia for three years.

Iain M. Johnston (44-171) 325-5056 (johnston_iain@jpmorgan.com)
Jonathan Adams (44-171) 325-4900 (adams_jonathan@jpmorgan.com)
Sean Faughnan (44-171) 325-4877 (faughnan_sean@jpmorgan.com)
Nick Delfas (44-171) 325-4779 (delfas_nicholas@jpmorgan.com)

Telia also has a strong position in the Estonian mobile telecommunications sector. It owns 24.5% of Estonian Mobile Telephone Co, with Telecom Finland holding a similar stake. The Estonian government is the majority shareholder.

Lithuania

The Lithuanian state-owned Lietuvos Telekomas and the Swedish Telia AB state communications company have signed a protocol of intent for the installation of a 220 km-long underwater optical communications cable between Lithuania's port city of Klaipeda and the Swedish island of Gotland. The project is estimated to cost between $8-10 million and is to be financed by the Swedes, according to the Lithuanian communications ministry. Telia representatives are interested in transmitting data in transit through Lithuania to Belarus, Russia and other CIS countries.

Ireland

The stake in Telecom Eireann highlights the benefits of the Unisource holding

In June 1996, KPN and Telia acquired a 20% stake in Telecom Eireann. KPN and Telia have not yet finalised their respective equity holdings in the joint venture, although it has been revealed that KPN will be the majority shareholder. The only other bidder for Telecom Eireann was Tele Danmark. The KPN/Telia consortium paid I£183 million for a the stake, with a further I£200 million to be paid if the consortium takes up an option on a further 15% holding. The implied equity value, assuming the full 35% holding is taken up, was therefore I£1,096 million ($1,733 million). Net debt is estimated at I£703 million, although the Irish government will reduce debt by I£220 million using proceeds from the transaction. Penetration in Ireland is still relatively low at 36.7% and offers scope for growth. There are, in addition, approximately 161,000 cellular subscribers (at end-April 1996), as well as approximately 290,000 cable-TV subscribers. In addition, the deal complements Unisource's activities, since Ireland has a successful niche in attracting multinationals, particularly in the high-technology field, companies which could be useful buyers of Unisource products.

United Kingdom

Telia UK Ltd. has expanded its capacity in the United Kingdom by a factor of three to an equivalent of 30,000 lines. It is making its low-cost national and international telephone service available to any U.K. business with a British Telecommunications Plc or Mercury Communications Ltd. connection costing more than £500 a month. The company claims its service gives savings of up to 38% on national calls and 54% on international.

Italy

Telia owns approximately 6.8% of the equity of Omnitel Pronto Italia, the second mobile operator in the fast growing Italian market. Omnitel was launched in October 1995 and announced in September of this year that it had obtained 500,000 subscribers.

Russia

Telia owns 12.7% of North-West GSM, one of two mobile operators in St. Petersburg (the other is analogue). North-West's other shareholders are the Russian telecommunications companies in the St. Petersburg area, Telenor of Norway and Telecom Finland. The network was launched in December 1994 and has approximately 16,000 subscribers. North-West recently announced an agreement with Nokia to expand capacity to 150,000 subscribers.

United States

Infonet Services Corp. and Unisource have signed a non-exclusive agreement which allows Unisource to offer improved global data services to European customers. Unisource and Infonet will interconnect their respective data networks using common platforms. Infonet will install switching equipment, purchased by Unisource, on its network and at customer premises to ensure seamless services. Unisource will then be able to leverage Infonet's World Network to extend the global reach of its European customers to 165 countries. This new arrangement in turn permits Infonet to offer Unisource's pan-European network services to its customers outside Europe who require dense in-country coverage on the European continent. Both organisations will support each other in sales and support activities. The agreement covers global X.25, NA, Dial-Access and Virtual Private Data Network services. Telia has recently increased its share of Infonet from 14 to 17.2% — representing an increase of 12.2% over the last two years.

Philippines
Telia owns an 10% share in Digital Telecommunications Phils. Inc. (Digitel). The Filipino government broke the monopoly of the Philippine Long Distance Telephone Company (PLDT) (Market Performer, P1,585) in 1993 by granting 12 licences for international or cellular services and divided the country into 11 zones. Digitel's principal competitor is BayanTel, which has the backing of Nynex Corp. (Market Performer, $46.88) which owns a 30% share. While both telecoms companies pursue aggressive marketing strategies and fight for second place, PLDT has also stepped up its campaign and has embarked upon an aggressive expansion plan of its own. Digitel has raised approximately P3.8 billion ($150 million) through a recent listing on the Philippine Stock Exchange. The firm plans to use the proceeds to help finance its telephone development, expansion programme and a major automation project amounting to around P3.7 billion. Also, part of the proceeds will be used to service debts, particularly lease payments to the Department of Transport and Communications, and for the partial payment of its outstanding loans totalling P746.5 million.

India and Sri Lanka
Telia has a 26% stake in JT Mobiles, which holds a GSM licence in Karnataka and Andhra Pradesh. Other shareholders include Jasmine Telecom of Thailand and the Telecom Authority of Thailand. Telia has also formed Telia Lanka, one of two companies granted the right to establish wireless local loop services in Sri Lanka in competition with the local PTO. Telia holds a 75% stake in Telia Lanka and is expected to invest $100 million under the terms of the licence.

Competition

Wireline Services

Despite strong competition, Telia has lost surprisingly little market share in the local loop

Telia's Market Share Eroded in Internet and International Services
Telia's main rival, Tele2, has only 5% of the total Swedish market according to the PTS but an estimated 20% of the international market and 40% of the market for Internet subscriptions, a market in which Telia has only 22%. Competition has intensified in the past 18 months as more operators have been granted international licences and as Telia has begun to respond to the threat in Internet services and regain market share.

The principal competitors to Telia for wireline services are:

- **Tele2:** Tele2 is part of the NetCom Systems group, which was spun off from the Kinnevik conglomerate in May 1996. Of NetCom's subsidiaries — Comviq GSM (the second mobile operator in Sweden), Kabelvision KB, Netcom GSM A/S (the second mobile operator in Norway) and the newly set-up companies Tele3 in Denmark and Norway and Lokalslingan in Sweden — only Tele2 presently returns a profit. Tele2 principally targets the retail and small corporate markets.

- **Telenordia:** Telenordia is an alliance between Telenor, Tele Danmark and BT founded in May 1995; Telecom Finland withdrew from the venture at an early stage. Telenordia has just opened an international ATM service for the Nordic region, though coverage has yet

Iain M. Johnston (44-171) 325-5056 (johnston_iain@jpmorgan.com)
Jonathan Adams (44-171) 325-4900 (adams_jonathan@jpmorgan.com)
Sean Faughnan (44-171) 325-4877 (faughnan_sean@jpmorgan.com)
Nick Delfas (44-171) 325-4779 (delfas_nicholas@jpmorgan.com)

to reach Finland, and aims to become the second Swedish operator. Telenordia sells Internet subscriptions to Swedish companies. Telenordia had turnover of Skr 50 million ($7.6 million) in 1995, a figure it expects to double in 1996. The company principally targets higher value customers.

- **Global One / France Telecom:** Global One, spearheaded by France Telecom, formed a strategic alliance with Swedish GSM operator Europolitan in 1996 to strengthen its bid to become Sweden's third national telecommunications carrier. The addition of cellular services makes France Telecom a more realistic all-round competitor to the country's two principal public operators; Telia owns Telia Mobitel and Kinnevik owns the country's other cellular operator, Comviq. France Telecom says that it has no plans to take the Europolitan relationship further through an equity investment. France Telecom has offered private data and voice fixed services to Swedish companies since 1991. The services include the supply of private circuits, high-speed data services, virtual private networks and toll-free 800 numbers, which have in general been aggressively priced.
- **MFS:** MFS was awarded an international carrier's licence from the Swedish government this year and expects to be awarded one soon in Britain, where the government has announced an end to the BT/Mercury duopoly. MFS has recently announced that it will start to offer international ATM services, available in 2 Mbps bands up to a current maximum of 45 Mbps, from its Stockholm fibre-optic metropolitan area network (MAN) to other MANs in London and across the Atlantic to the United States. MFS's ownership of international fibre-optic cables, its international licences and its offer of advanced data services are likely to present Telia with a powerful competitor in domestic and international markets.

Tele2: The Outlook

Tele2 is 100%-owned by NetCom Systems, the telecommunications arm of Kinnevik which was spun off in May 1996. Tele2 was formed in 1991 as a joint venture between Kinnevik and Cable & Wireless and has a 25-year franchise to provide services. The company became profitable in 1995 with 250,000 subscribers. At the time of the spin-off, Cable & Wireless exchanged its 39.9% direct stake in Tele2 for 9.5% of NetCom, implying a total equity value for Tele2 of $260 million.

Tele2 has taken 20% of the international call market

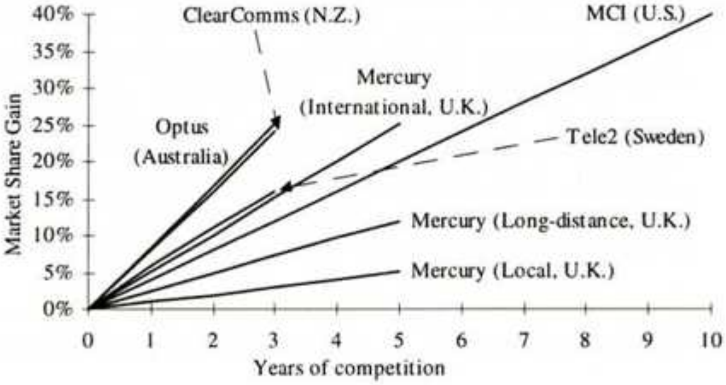
Competition has intensified significantly with the entry of Telenordia, France Telecom and MFS into the domestic market. The operators have linked themselves with existing infrastructure providers in a similar evolution to that being seen in the United Kingdom and France. Bahnverket, the national railway, has an agreement with Tele2 to provide transmission capacity over its fibre-optic network, connecting the main business hubs in the southern half of the country, as well as rights of way. Other alternative infrastructure providers include Swedish electricity utilities, organised under the umbrella organisation Svenska Kraftnät, and the City of Stockholm, which was one of the first cities in Europe to fold its telecommunications infrastructure and private network into a publicly held company, Stock AB.

Tele2 has an estimated 20% of the international market. However, in the fast growing private Internet subscription market it has an estimated 40% market share compared with Telia's 22%, according to a recent survey, which also stated that private subscribers spend around 552,000 hours on the Internet each week in Sweden.

The outlook for Tele2 will depend upon the success of the two other principal competitors in setting up and marketing alternative networks, as well as the effectiveness of Telia's response in attempting to protect its market share. We believe that Tele2 can expect to capture up to 30% of the international market in the next three years, an increase similar to that achieved by

Mercury in the United Kingdom, as prices are still far above our targets for a competitive market (an estimated 63 cents per minute versus a target of 15 cents). Other market segments, in particular local loop but also long-distance services, will be harder to penetrate, given the high costs of entry in local telephony in particular and the fact that Telia's tariffs are already close to our targets for a competitive market.

Chart 7: Tele2's Market Share Growth Is Similar to Mercury's International Business



Source: J.P. Morgan estimates, Company reports

Mobile Communications

Telia was the first operator in the Nordic countries to launch a cellular network on the Nordic Mobile Telephone (NMT) standard in October 1981. Comviq (then part of the Kinnevik Group) provided limited competition from that year and Sweden proved to be one of the most successful cellular markets, with penetration of 7.8% by the end of 1992. The introduction of GSM in that year by the two existing operators, as well as the entry of Nordictel (now Europolitan), spurred growth, making Sweden now the most well penetrated market in the world.

Competition in cellular is more intense than wireline

Table 4: Swedish Cellular Operators

	Launch	Subscribers	Ownership
Telia Mobitel			
Analogue	Oct 81	957,770	Telia 100%
GSM	Nov 92	658,737	
Comviq (GSM)	Sep 92	472,135	NetCom Systems 100% (Cable & Wireless 9.5%)
Europolitan (GSM)	Sep 92	239,794	NordicTel 100% (Airtouch 51%, Vodafone 19.5%)
Total		2,328,436	

Source: Mobile Communications; September 1, 1996 figures.

Comviq

Comviq is a subsidiary of NetCom Systems. Comviq accounted for 53% of NetCom's 1995 turnover of almost Skr 2 billion and Tele2 provided the remainder. NetCom posted a loss of Skr 532 million after net financial items last year, compared with a loss of Skr 585 million in 1994. NetCom aims to integrate Comviq, Tele2 and its other operations more closely in order to boost efficiency. It plans to expand its operations in Scandinavia both geographically and in terms of product range.

Europolitan

Europolitan is wholly owned by the publicly quoted Nordictel, whose major shareholders are U.S. cellular operator AirTouch (51%) and the United Kingdom's Vodafone (19.5%). It has recently concluded a new alliance with France Telecom with a view to becoming one of the major operators of fixed as well as mobile services in the Swedish market. The companies hope to offer a more competitive service to Swedish corporate customers by packaging together cellular and fixed network services. Europolitan already targets the corporate sector of the market more strongly than its rivals, especially Comviq, which have chased the consumer market.

Fourth Licence — Tele8

Tele8 of Malmö, which also has a small wireline operation, has been awarded the fourth national licence for the post-GSM generation of mobile telecommunications systems. Over the next five years the company is to invest Skr 3 billion in a DCS 1800 network. The Armstrong group of the United States holds a 66.5% stake in Tele8, while Tele8 chairman Arne Dunhem holds a 30% stake. Tele8's idea is to provide national mobile network services as well as fixed network service. The company will provide subscribers with small, inexpensive portable handsets which can be used on both mobile and fixed networks. Tele8 was the only applicant for a national licence; other applicants, such as Telenordia and France Telecom, preferred to request regional licences, since the high penetration of mobile telephony in Sweden made the economics of a national system less attractive.

PTS has also awarded mobile licences to Comviq, Europolitan and Telia for the new DCS 1800 frequencies, in order to provide sufficient capacity for projected subscriber numbers.

MOBILE: WORLD LEADER IN MOBILE

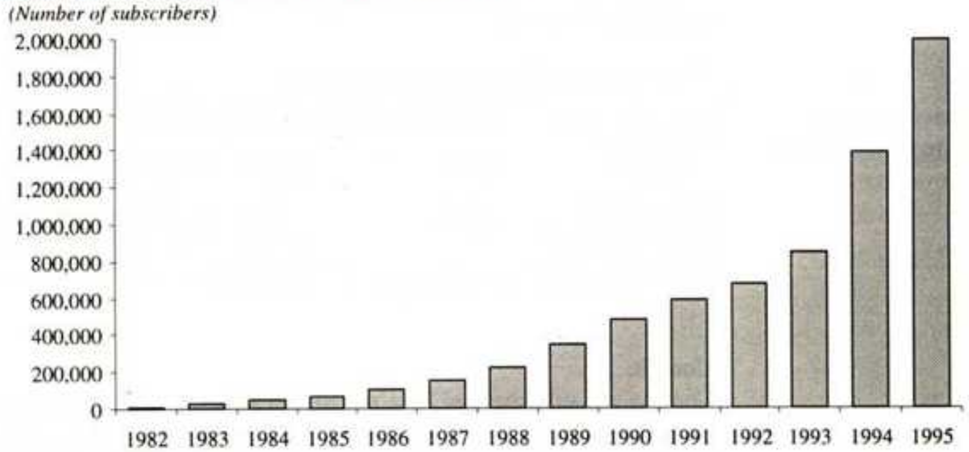
Where Is the Swedish Mobile Market Today?

The Swedish cellular market has been marked by spectacular growth since its inception in 1981. At the end of 1995 it had a total of 1.99 million subscribers, of which 1.44 million were with the Telia network:

Cellular subscriber growth has been dramatic ...

Chart 8: Cellular Growth Has Been Rapid...

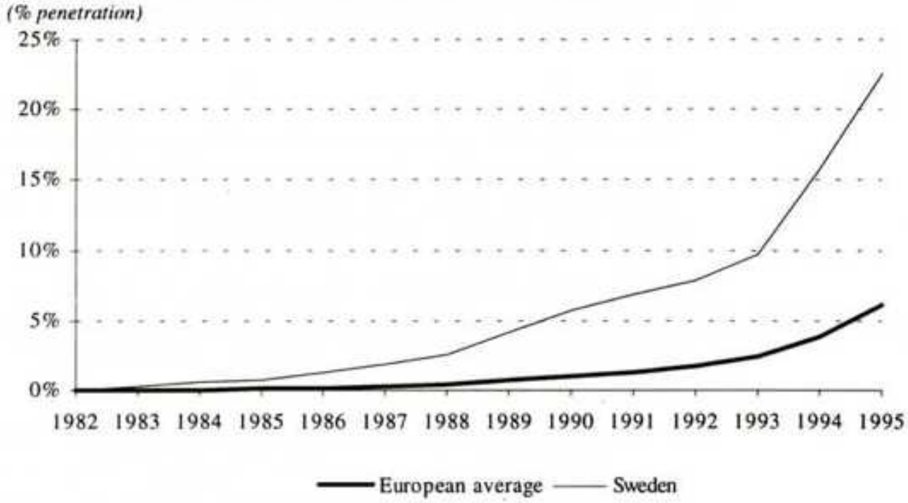
(Number of subscribers)



Source: Mobile Communications

... pushing Sweden far ahead of the rest of Europe

Chart 9: ...Leading to Exceptional Penetration Levels



Source: Mobile Communications

At the end of 1995, Swedish penetration levels were running at approximately 23%, versus 5.6% only five years before.

Sweden has been at the forefront of cellular growth in Europe and is one of the most highly developed cellular markets— arguably the most highly developed — in the world. Cellular services, originally based on the analogue NMT-450 service, were launched as early as 1981 and at the higher 900 MHz frequency were launched in late 1986, providing a valuable addition to spectrum at an early stage. GSM services were launched in September 1992. Indeed, cellular growth rates actually accelerated from a high level in 1992-93 with the launch of a GSM service in the country.

Nordic countries in general lead the way in cellular penetration

Table 5: A Global Leader in Cellular

Country	Penetration Rate December 1995
Norway	**22.9%**
Sweden	**22.7%**
Finland	**19.8%**
Denmark	**15.2%**
U.K.	9.4%
Italy	7.5%
Switzerland	6.4%
Germany	4.6%
Netherlands	3.5%
Spain	2.4%
France	2.4%

Source: J.P. Morgan estimates

What has made the Swedish market such an attractive vehicle for mobile growth? We believe that there is a variety of relatively rare factors which have accelerated the growth of the cellular market, not only in Sweden but in the Nordic region as a whole:

- First, there are high levels of average income (GDP per capita in Sweden was approximately $25,950 in 1995). Not only is income high, it is distributed relatively evenly across the population, which should also help cellular penetration levels;

J.P. Morgan Securities Ltd. – Equity Research
Iain M. Johnston (44-171) 325-5056 (johnston_iain@jpmorgan.com)
Jonathan Adams (44-171) 325-4900 (adams_jonathan@jpmorgan.com)
Sean Faughnan (44-171) 325-4877 (faughnan_sean@jpmorgan.com)
Nick Delfas (44-171) 325-4779 (delfas_nicholas@jpmorgan.com)

- Second, the presence of two key equipment manufacturing entities nearby, with Ericsson in Sweden and Nokia in Finland, has provided the market with leading-edge technology ahead of the markets elsewhere;

- Third, the country has consistently been a leader in terms of innovative tariff structures, helped by the three-player environment which has helped to stimulate growth. Interestingly, the growth in competition has not added substantially to churn. We believe that Swedish cellular market churn is currently running at around 15-20%, versus 28% in the United Kingdom and 22% in Germany;

- Fourth, the market has been shaped in part by the presence of second homes, often in relatively inaccessible areas, the concentration of the population in a few urban areas and a relatively flat topography (crucial in analogue development), which have all helped the development of the market;

- Fifth, the early introduction of competition has been an advantage. The entry of Comviq as the first analogue operator in 1981 and the entry of the second and third operators in GSM services ahead of Telia, Comviq and Europolitan, in September 1992, have further stimulated overall market growth;

- Sixth, mobile phones have been treated as an untaxed fringe benefit, encouraging the use of cellular phones not only for business but also for personal use.

Telia has a 70%-plus share of the mobile market

Telia remains the leader in the cellular market. We estimate that at the end of 1995 the company retained a market share of 71.6%; Comviq had, we estimate, a 21.0% market share (or a little over 421,000 subscribers) and Europolitan had a 7.5% market share (or 148,000 subscribers). The market is extremely competitive and, additionally, unique branding strategies have been put forward: Comviq has chosen a low-end, low-usage target user group; Europolitan has chosen a business/high-usage target group. Telia, by contrast, has chosen to focus on migrating its substantial analogue base. We believe that Telia, as the earliest player in the market, also has perhaps by definition the largest business user base.

What Is the Future for Mobile?

The Swedish market faces a number of key considerations:

1. Will cellular market penetration continue to grow?
2. Will PCS erode the competitive advantage of Telia?
3. Can Telia successfully migrate subscribers?

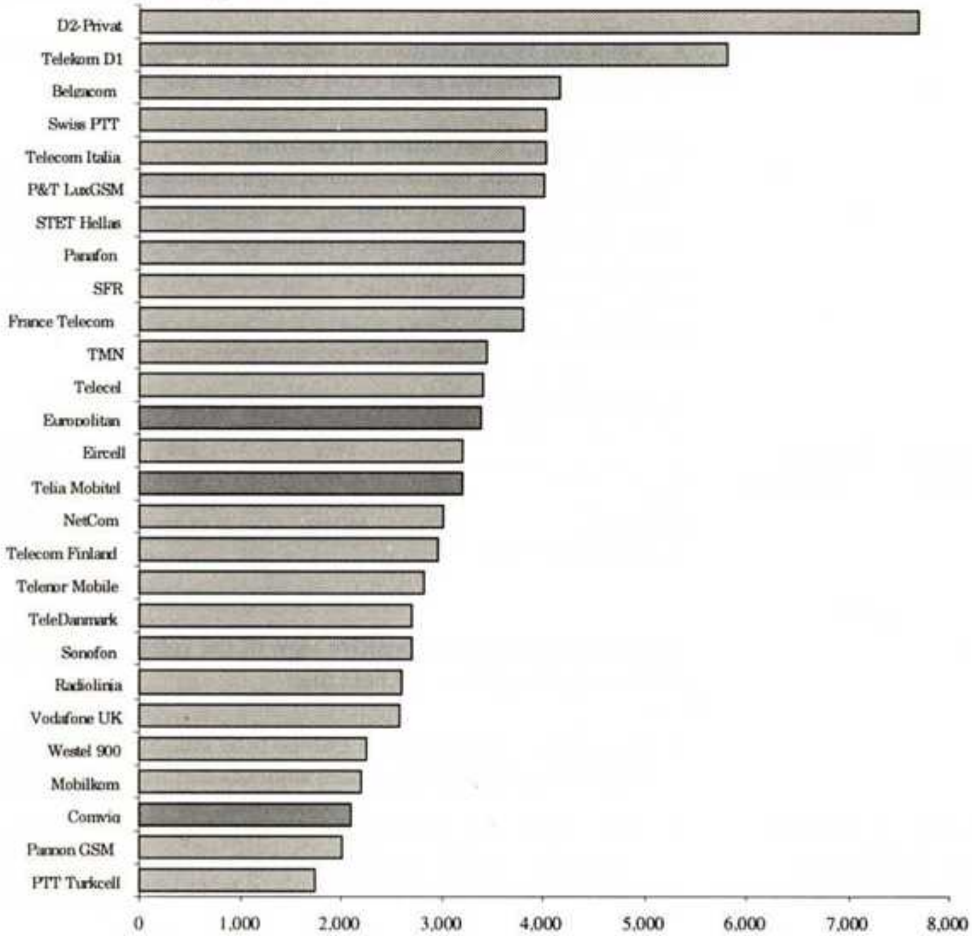
We believe market penetration will continue to rise in the immediate future. We are optimistic, bearing in mind the performance of the Swedish market in the first seven months of the year, when 303,000 subscribers were added to the network. Penetration levels have exceeded 25% during 1996.

Further growth in cellular demand seems inevitable, in our view. The decline in handset prices, pronounced in 1994 and 1995 for digital handsets, has the dual advantage of reducing acquisition costs of new subscribers as well as making the handsets more affordable. The market should be prepared for further tariff declines, although we believe a more innovative approach to tariffing could, in the long run, maintain average revenues per subscriber. This experience has been most pronounced at Orange in the United Kingdom. For example, Telia has per-second-billing on certain tariffs only; Comviq bills on a 10-second basis. However, Telia (and indeed, the Swedish market as a whole) has the added advantage of low tariffs to start, as outlined in Chart 10.

Chart 10: Tariffs Are Already Low

(Total annual cost including tax in ECU)

Cellular tariffs are among the lowest in Europe



Source: Mobile Europe

Indeed, the company continues to launch new tariff packages. A new NMT telephone, "Sverigetelefon", was recently launched, aimed at groups that have shown little interest in using mobile phones in the past, such as older women. The telephone's attractions are its ease of use and relatively low price, although daytime call rates are nearly twice as high as those for GSM telephones.

Will DCS Limit the Growth of Telia?

We are confident that the launch of DCS services will not add substantially to the competitive pressures at Telia:

DCS-1800 should increase capacity, not competition

- The launch of DCS-1800 services should stimulate the market, as it has in the United Kingdom, rather than simply erode market share (although this development might prove to be a natural consequence). Higher advertising expenditure, growing brand awareness and promotional packages all stimulate the market. Telia, Comviq and Europolitan have all obtained licences to use frequencies on the DCS 1800 band for their GSM services;
- The company is arguably facing capacity constraints as a result of the dramatic growth in the cellular market, as well as the presence of three operators. While Telia was forced to give up spectrum totalling 1.8 MHz recently in the 900 MHz band, the company was also

J.P. Morgan Securities Ltd. – Equity Research
Iain M. Johnston (44-171) 325-5056 (johnston_iain@jpmorgan.com)
Jonathan Adams (44-171) 325-4900 (adams_jonathan@jpmorgan.com)
Sean Faughnan (44-171) 325-4877 (faughnan_sean@jpmorgan.com)
Nick Delfas (44-171) 325-4779 (delfas_nicholas@jpmorgan.com)

awarded 15 MHz in the 1.8 GHz band. The PCS allocation actually enhances the Telia spectrum allocation;

- Telia will be in a position to exploit marketing and other synergies through the existence of DCS 1800, NMT and GSM operations side-by-side.

Mobile: A Key Contributor to Growth

Telia has increased the contribution from mobile to total revenues from 12.3% in 1992 to 15.7% in 1995, on our estimates. We estimate that in the same period revenues from the Telia Mobitel division (which includes paging and mobile data revenues as well as smaller businesses such as air telephony, Inmarsat representation and customer support) grew by 48% to Skr 6,449 million. We note that at the same time the number of mobile subscribers grew from 785,000 to 1.44 million.

Mobile is an important element in revenue growth

Table 6: Mobile Contribution to Total Revenues 1992-95

	1992	1993	1994	1995
Mobile revenues	4,355	4,609	5,247	6,449
Total revenues	35,297	35,347	37,939	41,060
% of total	*12.3%*	*13.0%*	*13.8%*	*15.7%*

Source: Company Reports

Investors should take a positive view of the relatively high proportion of revenues derived from mobile. We note that:

- Cellular revenue growth in Europe (and indeed globally) has been, and is forecast to continue, at high levels, which suggests further revenue advances at Telia;

While normally cellular strength should raise valuations ...

- The convergence of wireline technologies and wireless services suggests that Telia is particularly well positioned given high wireless penetration rates (though the company has indicated that it will not pursue full convergence immediately);

- Strong Equity Customer Connection (ECC: fixed wire plus mobile plus CATV) growth as a result of the high contribution from cellular has positive valuation implications. Indeed, in 1995, with total ECC growth of 3.9%, or 325,000 ECCs, we note that 81% of growth was derived from mobile operations.

There are, however, risks that investors would wish to consider from a revenue mix with a high cellular contribution. These concerns include:

... high penetration levels also represent a move into the unknown

- **Penetration levels of cellular in Sweden are moving into uncharted territory**. While this development does not necessarily infer a substantial slowdown in subscriber growth, as cellular penetration levels approach those of the PSTN, clearly some decreases in subscriber growth rates might be expected;

- **The prospect of more PCS operators.** More operators would potentially restrict the growth rates of Telia's cellular offering, although we note in other countries, such as the United Kingdom, the emergence of PCS operators actually stimulating market growth. Furthermore, Telia itself has applied for a PCS licence.

- **The cost-related risks associated with growing penetration given the high overall penetration rates**. As has been seen in recent results from Tele Danmark, higher subscriber acquisition costs in a highly competitive cellular market can add substantially to margin pressure, particularly in an environment where higher subscriber growth rates imply growth in marginal revenue generators;

- **The possibility that tariff erosion will accelerate in a more competitive environment.** With the entry of several more operators into the already competitive marketplace, the risk of tariff pressure grows. Given a substantial analogue user base (which at end-1995 was a little under 1 million) and the prospect of migration to digital, Telia is arguably in a vulnerable position.

- **Slower economic growth could reduce subscriber growth rates**. We note that in the U.K. market in particular, economic slowdown has in the past resulted in much lower rates of net subscriber additions (most apparent in 1991-92). However, Sweden has had a more turbulent economic history which has not impeded overall growth rates in cellular as the product has moved down the distribution curve to consumers. We anticipate a less obvious slowdown in the event of an economic recession.

Cellular Projections

Cellular Subscriber Growth Remains Strong

In our model, we envisage that Telia should be able to increase cellular subscribers by 177,000 in 1996 (or 12.3% growth), by 128,000 in 1997 (7.9% growth) and by 78,000 in 1998 (4.5% growth). We anticipate that market share would as a result fall from 65% in 1996 to 59% in 1998.

Telia's long-term cellular market share should fall

Table 7: Cellular Subscriber Projections

	1995	1996E	1997E	1998E	1999E	2000E
Telia subscribers	1,438	1,615	1,743	1,821	1,906	1,997
Total market	1,981	2,502	2,877	3,107	3,356	3,625
Penetration	22%	28%	32%	35%	37%	40%
Telia market share	73%	65%	61%	59%	57%	55%

Source: J.P. Morgan estimates

ATTACKING THE COSTS: MARGIN ENHANCEMENT AT THE READY

We believe that Telia is determined to reduce the cost structure in order to remain competitive in the face of newer, low-cost entrants in the Swedish market place. We believe that, while progress has been made, there remains scope to raise competitiveness to far higher levels.

Telia in Context

In the past five years, operating margins have been extremely volatile. EBIT margins have varied from 10.6% to 15.5%:

Table 8: EBIT and EBITDA Margins Have Been Volatile

	1991	1992	1993	1994	1995
EBIT	10.6%	12.1%	15.5%	12.1%	11.0%
EBITDA	31.5%	37.2%	37.5%	34.8%	31.2%

Source: Company Reports

Iain M. Johnston (44-171) 325-5056 (johnston_iain@jpmorgan.com)
Jonathan Adams (44-171) 325-4900 (adams_jonathan@jpmorgan.com)
Sean Faughnan (44-171) 325-4877 (faughnan_sean@jpmorgan.com)
Nick Delfas (44-171) 325-4779 (delfas_nicholas@jpmorgan.com)

By contrast, EBIT margins at BT have been between 19% and 27%, although the EBITDA differential is smaller owing to faster rates of depreciation at Telia.

BT has better EBIT and EBITDA margins

Table 9: BT's EBIT and EBITDA Margins Have Been Higher

	1992	1993	1994	1995	1996
EBIT	26.9%	18.5%	22.0%	19.4%	21.7%
EBITDA	N/A	34.5%	37.8%	34.8%	36.8%

Source: Company Reports; March year-end.

Indeed, the issue with Telia is whether EBIT levels can be raised to those of British Telecom, while the company continues to operate in a highly competitive environment. Below we focus on two areas where we believe substantial reductions in costs can be obtained: accounting rates and staff costs.

Accounting Rates: Scope to Enforce Reductions

Accounting rates should fall, helping costs

We expect that the cost of international interconnection for delivering calls should fall with liberalisation in Europe, as international settlement falls away with liberalisation after 1998. The price of international settlement is about half the full international call price, so about $0.25 per minute within Europe, while we estimate that local call interconnection should not be higher than about $0.05 per minute. Operating as a consortium, Unisource is arguably in a more powerful position to put pressure on accounting rate settlements. Such a shift in accounting rates will inevitably meet with opposition from a number of operators, most notably in emerging markets, where incoming call volumes often swamp outbound traffic flows, providing these smaller carriers with a healthy revenue stream. Within Europe, however, the rationale for lowering rates should be more powerful, as traffic flows between the developed countries tend to be better matched.

Telia has been demanding accounting rate reductions of up to 80% from carriers in Denmark, Finland, France, Norway and the United Kingdom and threatening operators that failure to comply carries the risk of being bypassed in transit traffic. As Sweden has opened its market for all services, including international, Telia does not distinguish between domestic and international tariffs. Competitors are capitalising on this situation, as the national interconnect rate charged by Telia is 90% lower than the international accounting rate charged to Telia by carriers in less liberal environments. **For example, Telia charges France Telecom the national interconnect rate of Skr 0.23 ($0.04) per minute to connect to its network. However, when Telia connects to France Telecom's network in France, it is charged Skr 1.75 ($0.26) per minute under the traditional accounting system.** We believe that in the long run Telia should be able to negotiate substantially lower rates with other European carriers and, more effective still, Unisource as a grouping should be able to exert still more powerful pressure on intransigent counterparties.

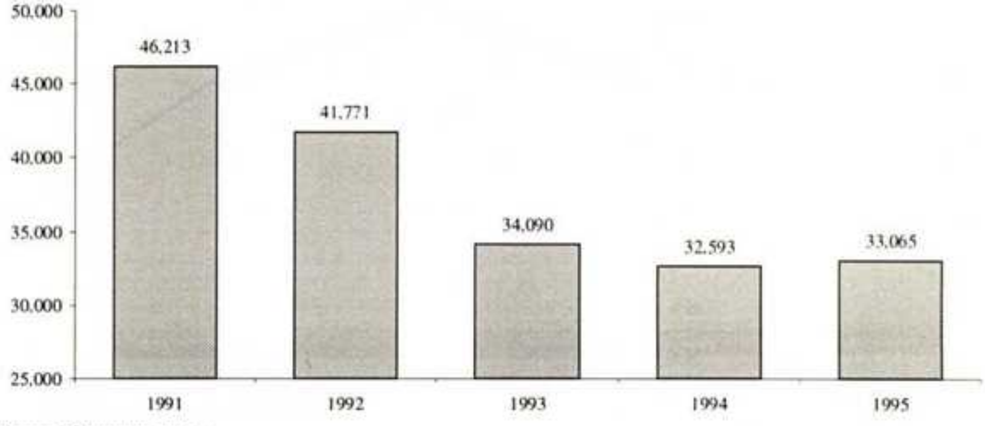
Staff Costs: Can the Good Work Continue?

It is significant to note that exceptional work has already been done by the company in the field of staffing and raising efficiency. The process of staff cuts has a long history at Telia: in 1986, the company, then part of Televerket, employed some 46,800 staff. This figure has fallen progressively and, at end-1995, the company employed some 33,000 staff:

Staff numbers have stabilised at around 33,000 ...

Chart 11: Staff Numbers Have Fallen Dramatically

(Staff numbers)



Source: Company reports

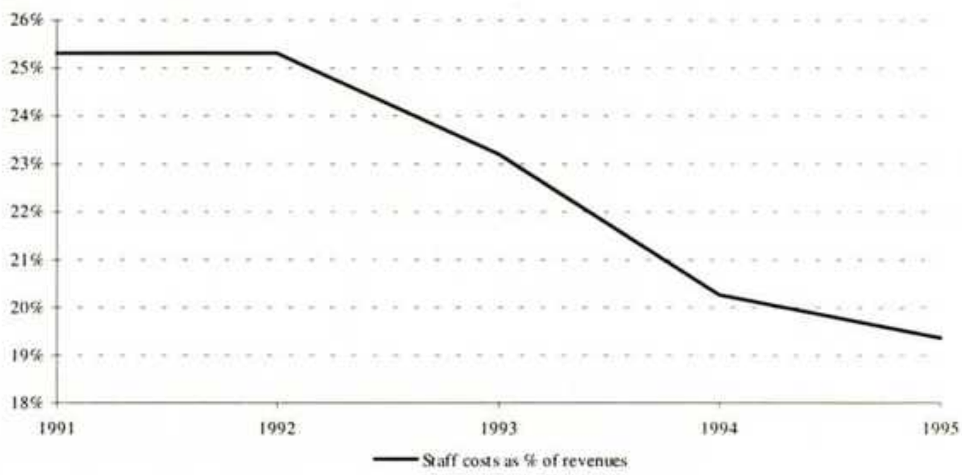
Healthy Progress to Date...

The largest percentage decrease in recent years occurred in 1993, as the company was split from Televerke and was separately incorporated. The company was able to reduce staff numbers, cutting the overall bill for personnel from Skr 8,703 million to Skr 7,948 million. **We note that, as a result of the decrease in the total wages bill, the company has been in a position to enhance operating margin by 5.8 percentage points since 1991.**

... although the cost base is shrinking relative to revenues

Chart 12: Staff Costs Relative to Revenues

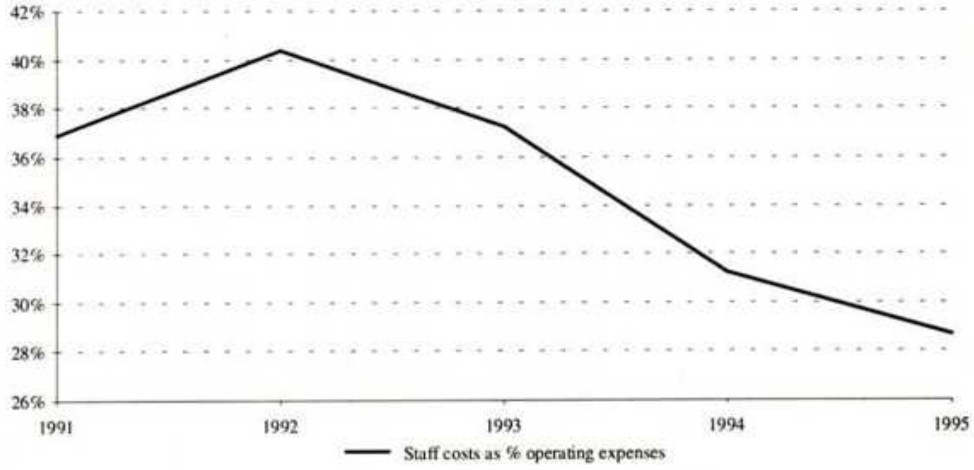
(%)



Source: Company Reports

Since 1991 staff costs have fallen dramatically from 25.3% of revenues in 1991 to 19.4% in 1995.

Chart 13: Staff Costs Relative to Total Operating Costs

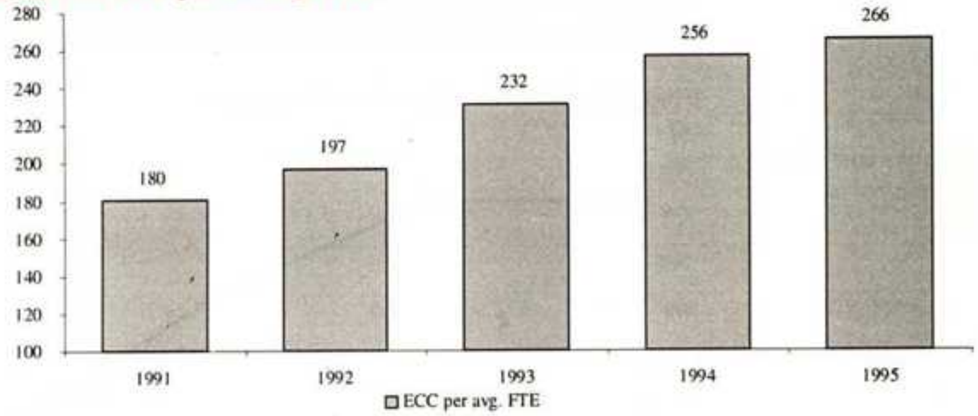


Source: Company Reports

At the same time, the decline in staffing levels has also resulted in much greater efficiency as measured by ECC per employee.

Productivity has been rising...

Chart 14: ECC per Average FTE



Source: Company Reports

We believe it is extremely important to measure ECC per employee at Telia, given the growing importance of cellular to the network. ECCs per employee have risen by 48% in the past five years. By contrast, reflecting the wireline network only would have suggested a growth in lines per employee of only 31%, from 140 to 183 in the same period.

How does this performance compare with the rest of Europe? Based on J.P. Morgan data, we believe that Telia has turned itself into one of the more efficient operators in Europe based on ECC per employee.

... putting Telia among Europe's better telcos

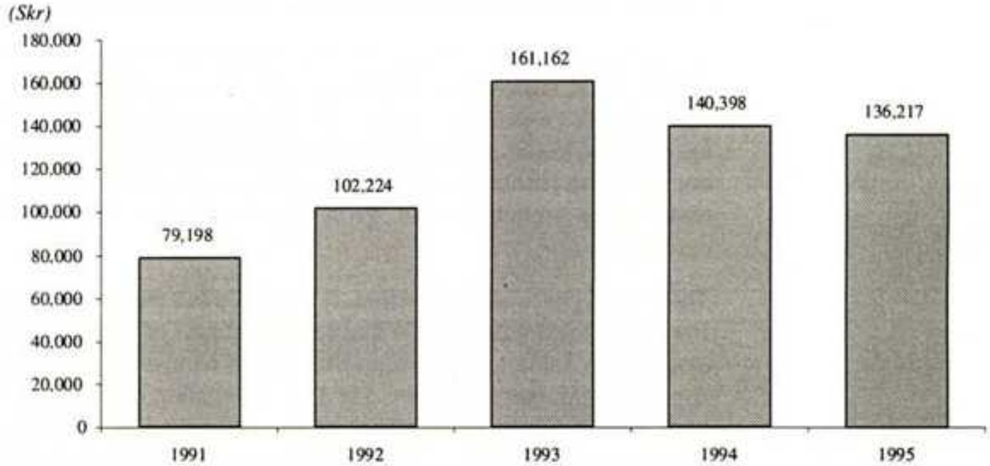
Table 10: ECCs per Employee

Company	ECCs per Employee
TI	275
Tele Danmark	270
Telia	**264**
KPN, ex Posts	254
Telefónica de España ex TISA	231
BT	221
Portugal Telecom	200

Source: J.P. Morgan estimates, 1995 data, March 1996 for BT

At the same time, margin pressure has hurt operating profit per employee, which has declined from Skr 160,000 in 1993 to approximately Skr 137,000 ($20,600).

Chart 15: EBIT per Employee Has Been Under Pressure



Source: Company Reports

However, these figures paint an unflattering picture when compared with the European peer group.

Table 11: EBIT per Employee Is Low in a European Context

EBIT per employee could be raised ...

($)

Company	EBIT per Employee
KPN, ex Posts	50,000
Tele Danmark	45,000
Telefónica de España ex TISA	43,000
BT	38,000
TI	37,000
Portugal Telecom	35,000
Telia	**21,000**

Source: J.P. Morgan, 1995 data, March 1996 for BT

However, given very high levels of depreciation at Telia, it is worth noting that the company appears more attractive on EBITDA per employee but still lags other European operators.

... although in part this reflects the intensity of competition

Table 12: EBITDA per Employee Still Lags Other European Operators

($)

Company	EBITDA per Employee
TI	108,000
KPN, ex Posts	98,000
Telefónica de España ex TISA	93,000
Tele Danmark	79,000
Portugal Telecom	66,000
BT	63,000
Telia	**59,000**

Source: J.P. Morgan, 1995 data, March 1996 for BT

On both EBIT and EBITDA per employee, Telia's performance is affected by the low profitability of its cable operations. However, a comparison with BT, which does not have any cable subscribers, suggests that competition in the domestic market also goes some way towards explaining these two companies' lower EBIT and EBITDA per employee.

It is apparent that Telia has a cost structure at variance with other European operators. This conclusion is, admittedly, influenced by the degree of outsourcing to which individual operators are prepared to commit. For example, a number of the Southern European operators are prepared to sub-contract a variety of labour-intensive functions. However, we would point out that, at an EBITDA or EBIT level, this development would be offset by higher external costs and, as we noted earlier, Telia has lower margins than the bulk of other European operators.

The overall conclusion, therefore, is that Telia has the potential to reduce staffing levels from the current position. To illustrate the impact of potential staff reductions, we have assumed, in Table 13, that Telia reduces staff numbers to the level of the U.S. RBOC Ameritech (Market Performer, $58.5) — an implied level of 410 ECCs per employee. We have then examined the impact of such an efficiency ratio on the company, though it should be recognised that some part of the efficiency gap can be explained with reference to the superior economies of scale that a company such as Ameritech can achieve with a larger base of potential subscribers and a more favourable geographical environment.

Ameritech appears far more efficient than Telia, suggesting more productivity gains ahead

Table 13: Telia in Chicago: An Illustration of Efficiency

	1995
Ameritech ECCs per employee:	**410**
Telia ECCs	8,726
Telia average FTE's	32,825
Telia ECCs per employee:	**266**
No. of employees at Ameritech ECC/employee:	21,283
Difference	11,542
Est. personnel expense per avg. FTE: (Skr 000)	322
Implied personnel expense saving (Skr million)	3,711
Previous personnel expenses (incl. social sec.) (Skr million)	10,554
New personnel expenses (Skr million)	6,843
Previous EBIT margin	*11.0%*
Previous EBITDA margin	*31.2%*
New EBIT margin	**20.0%**
New EBITDA margin	**40.2%**
EBIT/employee ($000)	**54**
EBITDA/employee ($000)	**109**

Source: Company information, J.P. Morgan estimates.

As can be seen in the above table, based on a reduction in staff numbers of 11,500, Telia would be moving towards EBIT/employee and EBITDA/employee levels that would make it the most efficient operator in our peer group study. In other words, should Telia be seeking a cost structure comparable with other European operators, it could be achieved largely through reductions in staffing levels to those of Ameritech, though it should be noted that Ameritech's efficiency level is much higher than that of European operators.

Table 14: EBIT per Employee — Telia as Ameritech

($)

Company	EBIT per Employee
Telia as Ameritech	**54,000**
KPN, ex Posts	50,000
Tele Danmark	45,000
Telefónica de España ex TISA	43,000
BT	38,000
TI	37,000
Portugal Telecom	35,000

Source: J.P. Morgan, 1995 data, March 1996 for BT

Table 15: EBITDA per Employee — Telia as Ameritech

($)

Company	EBITDA per Employee
Telia as Ameritech	**109,000**
TI	108,000
KPN, ex Posts	98,000
Telefónica de España ex TISA	93,000
Tele Danmark	79,000
Portugal Telecom	66,000
BT	63,000

Source: J.P. Morgan, 1995 data, March 1996 for BT

It is important to recognise that:

- Telia has other growth areas that will require staffing. In other words, reductions in certain areas will be offset by stiff increases in mobile services, marketing, multimedia and other value-added products. Not only will this restrict the potential staff decreases but it may also result in higher average staff costs as the skill-set shifts;
- Other European operators will be faced with competitive challenges that will arguably result in EBITDA and EBIT pressure and perhaps reduce the differential between Telia and its peer group;
- The range of functions carried out by Ameritech is more restrictive;
- No European operator will produce static efficiency ratios: these are shifting targets, dependent upon operating conditions which are the result of competitive and regulatory pressures.

J.P. Morgan Securities Ltd. – Equity Research
Iain M. Johnston (44-171) 325-5056 (johnston_iain@jpmorgan.com)
Jonathan Adams (44-171) 325-4900 (adams_jonathan@jpmorgan.com)
Sean Faughnan (44-171) 325-4877 (faughnan_sean@jpmorgan.com)
Nick Delfas (44-171) 325-4779 (delfas_nicholas@jpmorgan.com)

Financial Projections

The following projections are based upon our estimates of Telia's domestic revenue breakdown in 1995. These estimates are derived from company information, such as international and domestic minutes, combined with tariff data and assumptions about the split between local and long-distance usage. All revenues from other activities, such as Svenska Kabel-TV, TeleMedia, TeleLarm or Telaris, are grouped together.

Top-line growth from existing businesses is subdued. Penetration is already high in both fixed and mobile services and, though we project substantial growth in the total mobile market (from 1.98 million subscribers at year-end 1995 to 3.62 million in 2000), Telia's market share should fall from 73% to 55% as its two major competitors gain market share.

Local and long-distance tariffs are already well balanced but will be subject to further competitive pressures, while international tariffs should almost halve over the period.

We forecast steady reductions in the workforce of 3% per annum but these are coupled with provisioning and increasing costs in research and development and sales as Telia begins to move up the "value chain". We have not attempted to forecast increases in levels of shares and participations as the company begins to expand through the Nordic region but have included an increase in Telia's share of earnings in associated companies as Unisource turns to profit in 1998.

Table 16: Tariff Assumptions and Projections

(Average prices $)

	1995	1996E	1997E	1998E	1999E	2000E	CAGR 1995-00E
Line rental per month	16.8	16.9	17.0	17.2	17.4	17.5	0.8%
Local call	0.03	0.03	0.03	0.04	0.04	0.04	2.9%
Long-distance	0.08	0.08	0.08	0.08	0.08	0.08	-1.2%
International	0.57	0.51	0.45	0.41	0.37	0.33	-10.5%
Number of lines (thousands)	6,013	6,043	6,073	6,104	6,134	6,165	0.5%
Local call (million minutes)	17,945	18,483	19,038	19,609	20,197	20,803	3.0%
Long-distance (million minutes)	11,963	12,561	13,189	13,849	14,541	15,268	5.0%
International (million minutes)	702	774	853	939	1,035	1,141	10.2%
Mobile rev. per sub. per month	58	55	50	50	45	45	-4.8%

Source: J.P. Morgan estimates

Table 17: Financial and Operating Statistics Summary

(Skr million)

	1995	1996E	1997E	1998E	1999E	2000E	CAGR 1995-00E
Total sales	41,060	43,091	45,223	47,976	50,257	53,572	5.5%
EBITDA	12,795	13,576	14,482	15,978	16,483	18,103	7.2%
Cash earnings	10,525	11,197	11,972	13,115	13,598	14,836	7.1%
Operating profit	4,504	4,704	4,987	5,917	5,898	7,024	9.3%
Net income	2,234	2,325	2,477	3,053	3,013	3,757	11.0%
Dividends	1,000	1,023	1,090	1,160	1,205	1,390	6.8%
Capex (PP&E only)	10,207	11,950	12,295	12,650	13,016	13,393	5.6%
EBITDA margin	31%	32%	32%	33%	33%	34%	1.6%
Operating margin	11%	11%	11%	12%	12%	13%	3.6%
Pre-tax ROCE	12%	12%	12%	13%	12%	14%	2.3%
Debt/(debt + equity)	18%	18%	21%	22%	22%	20%	2.9%
Average number of FTE's	32,825	31,840	30,885	29,958	29,060	28,188	-3.0%
Total salaries and social security	10,554	10,647	10,741	10,835	10,930	11,027	0.9%
Op. profit per avg. FTE (Skr 000)	137	148	161	197	203	249	12.7%
Total empl. costs as % sales	26%	25%	24%	23%	22%	21%	-4.3%
Fixed subscriptions	6,013	6,043	6,073	6,104	6,134	6,165	0.5%
Line penetration	68%	68%	68%	68%	68%	68%	0.0%
Mobile subscriptions	1,438	1,615	1,743	1,821	1,906	1,997	6.8%
Mobile penetration	22%	28%	32%	35%	37%	40%	12.3%

Source: J.P. Morgan estimates

J.P. Morgan Securities Ltd. – Equity Research
Iain M. Johnston (44-171) 325-5056 (johnston_iain@jpmorgan.com)
Jonathan Adams (44-171) 325-4900 (adams_jonathan@jpmorgan.com)
Sean Faughnan (44-171) 325-4877 (faughnan_sean@jpmorgan.com)
Nick Delfas (44-171) 325-4779 (delfas_nicholas@jpmorgan.com)

Table 18: Income Statement

(Skr million)

	1995 (1)	1996E	1997E	1998E	1999E	2000E	CAGR 1995-00E
Line rental	8,081	8,198	8,317	8,437	8,559	8,682	1.4%
Local calls	3,948	4,188	4,443	4,714	5,001	5,306	6.1%
Long-distance calls	6,568	6,819	7,080	7,350	7,632	7,923	3.8%
International calls	2,663	2,630	2,597	2,564	2,532	2,501	-1.2%
Mobile revenues	6,449	6,751	6,750	7,164	6,742	7,060	1.8%
Other revenues	12,121	13,454	14,934	16,577	18,566	20,794	11.4%
Total invoicing	**39,830**	**42,040**	**44,120**	**46,806**	**49,031**	**52,266**	5.6%
Interest revenues, finance company	479	420	441	468	490	523	
Other income	751	631	662	702	735	784	
Total sales	**41,060**	**43,091**	**45,223**	**47,976**	**50,257**	**53,572**	5.5%
% change	8.2%	4.9%	4.9%	6.1%	4.8%	6.6%	
Production (excl. restr. prov.)	(17,857)	(17,924)	(18,918)	(19,854)	(21,063)	(22,064)	4.3%
Restructuring provision	-	(910)	(882)	(856)	(830)	(805)	
Sales	(4,792)	(4,780)	(5,045)	(5,515)	(5,851)	(6,374)	5.9%
Administration	(4,699)	(4,700)	(4,961)	(5,206)	(5,523)	(5,786)	4.2%
Research & development	(369)	(597)	(631)	(662)	(702)	(735)	14.8%
Interest expenses, finance company	(3)	(5)	(5)	(5)	(5)	(5)	10.8%
Total operating expenses	**(27,720)**	**(28,915)**	**(30,441)**	**(32,098)**	**(33,974)**	**(35,770)**	5.2%
% of sales	67.5%	67.1%	67.3%	66.9%	67.6%	66.8%	
% change	12.5%	4.3%	5.3%	5.4%	5.8%	5.3%	
Share of earnings in assoc. companies	(545)	(600)	(300)	100.0	200.0	300.0	-188.7%
Depreciation according to plan	(8,291)	(8,872)	(9,495)	(10,062)	(10,586)	(11,079)	6.0%
Operating profit	**4,504**	**4,704**	**4,987**	**5,917**	**5,898**	**7,024**	9.3%
% of sales	11.0%	10.9%	11.0%	12.3%	11.7%	13.1%	
Financial income	294	37	0	0	0	0	
Financial expense	(658)	(368)	(387)	(457)	(498)	(514)	
Interest component of yr's pension prov.	(913)	(900)	(900)	(900)	(900)	(900)	
Net financial inc/(exp)	(1,277)	(1,231)	(1,287)	(1,357)	(1,398)	(1,414)	
Profit before tax	**3,227**	**3,473**	**3,701**	**4,560**	**4,499**	**5,610**	11.7%
Provision for taxes	(991)	(1,146)	(1,221)	(1,505)	(1,485)	(1,851)	13.3%
Minority interests	(2)	(2)	(2)	(2)	(2)	(2)	
Net income	**2,234**	**2,325**	**2,477**	**3,053**	**3,013**	**3,757**	11.0%
% change	-0.1%	4.1%	6.6%	23.2%	-1.3%	24.7%	

(1) 1995 revenue breakdown is estimated
Source: J.P. Morgan estimates

Table 19: Balance Sheet

	1995	1996E	1997E	1998E	1999E	2000E	% CAGR 1995-00E
Net plant, equipm'nt & intang.	36,192	39,040	41,610	43,969	46,170	48,254	5.9%
Net buildings and land	5,646	5,876	6,106	6,336	6,566	6,796	3.8%
Shares and participations	1,717	1,767	1,817	1,867	1,917	1,967	2.8%
Long-term receivables	655	729	765	811	850	906	6.7%
Total fixed assets	**44,210**	**47,412**	**50,298**	**52,983**	**55,502**	**57,923**	5.6%
Cash & equivalents	1,342	0	0	0	0	0	-100.0%
Net customer receivables	6,934	7,143	7,497	7,953	8,331	8,881	5.1%
Other receivables	3,655	4,094	4,296	4,558	4,774	5,089	6.8%
Inventory	1,233	1,293	1,357	1,439	1,508	1,607	5.4%
Total current assets	**13,164**	**12,530**	**13,150**	**13,950**	**14,614**	**15,578**	3.4%
Total assets	**57,374**	**59,942**	**63,448**	**66,934**	**70,116**	**73,500**	5.1%
Share capital and reserves	**21,169**	**22,494**	**23,948**	**25,911**	**27,764**	**30,315**	7.4%
Minority interests	13	15	15	15	15	15	2.9%
Long-term liab. (def. taxes)	3,218	3,862	3,669	3,485	3,311	3,145	-0.5%
Provisions for pensions	14,875	14,987	15,099	15,212	15,326	15,441	0.8%
Other long-term liabilities (long-term debt)	2,020	2,000	2,000	2,000	2,000	2,000	-0.2%
Total long-term liabilities	**20,113**	**20,848**	**20,767**	**20,697**	**20,637**	**20,587**	0.5%
Accounts payable	3,411	3,470	3,653	3,852	4,077	4,292	4.7%
Other liabilities (NWI)	10,175	10,256	10,699	11,263	11,876	12,570	4.3%
Short-term debt	2,493	2,858	4,366	5,195	5,747	5,721	18.1%
Total current liabilities	**16,079**	**16,585**	**18,717**	**20,310**	**21,700**	**22,583**	7.0%
Total liabilities	**57,374**	**59,942**	**63,448**	**66,934**	**70,116**	**73,500**	5.1%

Source: J.P. Morgan estimates

Table 20: Cash Flow

	1995	1996E	1997E	1998E	1999E	2000E	% CAGR 1995-00E
Net income	2,234	2,325	2,477	3,053	3,013	3,757	11.0%
+ Depreciation	8,291	8,872	9,495	10,062	10,586	11,079	6.0%
- Increase in NWI	170	(568)	5	(37)	175	(54)	
Net cash from operations	**10,695**	**10,629**	**11,977**	**13,078**	**13,773**	**14,781**	6.7%
- Total capex net of total sales	(12,031)	(12,000)	(12,345)	(12,700)	(13,066)	(13,443)	2.2%
Net cash from investments	**(12,031)**	**(12,000)**	**(12,345)**	**(12,700)**	**(13,066)**	**(13,443)**	2.2%
- Increase in long-term receivables	285	(74)	(36)	(47)	(39)	(56)	
+ Increase in long-term liabilities	780	644	(193)	(183)	(174)	(166)	
+ Increase in pension provisions	260	112	112	113	114	115	-15.1%
+ Increase in total borrowed funds	(126)	345	1,507	829	552	(26)	
- Dividends (t-1)	(900)	(1,000)	(1,023)	(1,090)	(1,160)	(1,205)	
Net cash from financing	**299**	**27**	**368**	**(377)**	**(707)**	**(1,338)**	
Inc/(dec) in cash & equivalents	**(1,037)**	**(1,344)**	**(0)**	**(0)**	**(0)**	**(0)**	

Source: J.P. Morgan estimates

J.P. Morgan Global Equity Research

AEROSPACE/DEFENSE ELECTRONICS:
Roger R. Threlfall (1-212) 648-9486
Jordan Klein (1-212) 648-7485

AIRLINES:
Jeffrey Long, CFA (1-212) 648-4792
Cheryl A. Cramer (1-212) 648-3861

APPAREL & TEXTILES:
Carol A. Pope (1-212) 648-6838
Noelle V. Grainger (1-212) 648-9268

AUTOS, AUTO PARTS & TIRES:
Europe –
Nick Snee (44-171) 325-5522
Camilla Darwin (44-171) 325-4825
United States –
David Bradley, CFA (1-212) 648-7291
Steven Gee (1-212) 648-7218

BEVERAGES & CONSUMER GOODS:
Asia –
Andrew G. Baird (852) 2841-1156
Europe –
Veronique Adam (33-1) 4015-4890
Luis Marini-Portugal (33-1) 4015-4051
Latin America –
Annette Franqui (1-212) 648-9473

CEMENT & CONSTRUCTION:
Latin America –
Eric P. Linder (1-212) 648-3916

CHEMICALS:
Europe –
Peter Houghton (44-171) 325-5480
Debbie Hartley (44-171) 325-5533
United States –
Majors & Fertilizers –
Donald D. Carson (1-212) 648-8950
David Dove (1-212) 648-9944
Specialty Chemicals –
Gilbert K. Yang (1-212) 648-9430

FINANCIAL SERVICES:
Asia –
Banks –
John A. Wadle (852) 2973-5440
Elan Cohen (852) 2973-5552
Europe –
Banks and Insurance –
Catherine Woods (44-171) 325-4171
Carlos Pertejo (44-171) 325-4442
Nikola Wendelstadt (44-171) 325-4859
Haakon Boenes (44-171) 325-4926
Latin America –
Banks –
Brian R. Pearl (1-212) 648-8510
United States –
Banks –
Catherine L. Murray (1-212) 648-9418
Sheila Reilly (1-212) 648-4329
Mario Pierry (1-212) 648-6694
Brokers and Specialty Finance –
Michael J. Freudenstein (1-212) 648-7532
Lissa Rosenthal (1-212) 648-4992
Government Sponsored Enterprises & Thrifts –
Vivek Juneja (1-212) 648-6869
Life Insurance –
Michelle A. Giordano (1-212) 648-7492
Ashley Ragsdale (1-212) 648-6292
Non-Life Insurance –
James R. English (1-212) 648-3429
Douglas J. Elliott (1-212) 648-6765
Douglas R. Simpson (1-212) 648-3640

FOOD:
Erika Gritman Long (1-212) 648-7506
Melissa Hinkle (1-212) 648-6967

HEALTHCARE:
Europe –
Pharmaceuticals –
Mark Becker (44-171) 325-5351
United States –
Biotechnology –
Craig C. Parker (1-415) 954-9283
Kimberly Dzien (1-415) 954-3205
Hospital Management & Death Care Services –
Joseph Chiarelli (1-212) 648-6664
Glen Santangelo (1-212) 648-6298
Medical Technology & Supplies –
Michael N. Weinstein (1-212) 648-6699
Paul Zych (1-212) 648-9426
Nursing Homes & Managed Care –
Joan Dillon (1-212) 648-7311
Goran Avdicevic (1-212) 648-6780
Pharmaceuticals –
John Sherman (1-212) 648-4825

HOUSEHOLD PRODUCTS & COSMETICS:
Michael Grant (1-212) 648-4750
Gregory E. Boosin (1-212) 648-7965

MACHINERY:
Gary F. McManus, CFA (1-212) 648-6791
Garo Norian (1-212) 648-6287

MARKET STRATEGY:
Europe –
Gary Dugan (44-171) 325-5601
Caroline Méroz (44-171) 325-4247
Latin America –
Benjamin Faucett (1-212) 648-8216
United States –
Douglas R. Cliggott (1-212) 648-7064
Thomas C. Van Leuven (1-212) 648-7055

MEDIA:
Matthew J. Harrigan (1-212) 648-6307

METALS & MINING:
David Neuhaus (1-212) 648-7762

MULTI-INDUSTRY & CONGLOMERATES:
Asia
Hatim N. Hoosenally (852) 2841-1387
Latin America –
Mary Bourque (1-212) 648-9773
United States –
Vivian Kuan (1-212) 648-4920
Anthony Nappo (1-212) 648-6689

OIL & GAS:
International and European Integrated –
Carol Bell (44-171) 325-5546
Nick Davies (44-171) 325-0765
Katie Flanagan (44-171) 325-5277
Greg Quine (44-171) 325-4920
Latin America –
Mary Bourque (1-212) 648-9773
United States –
Domestic Integrated –
Jay Wilson (1-212) 648-6684
Theresa Chan (1-212) 648-3932
Exploration & Production –
Michael N. Cha (1-212) 648-3653
Haera Lee (1-212) 648-8627

PAPER & FOREST PRODUCTS:
Mark W. Connelly (1-212) 648-4287
Robert Bayer (1-212) 648-6661

RAILROADS:
Jill Kaufman Evans (1-212) 648-9422

REAL ESTATE:
Asia –
Chuk-Kwan Ting (852) 2841-1379
Valerie Brown (852) 2841-1167
United States –
Lee Schalop (1-212) 648-9470
Alexis V. Hughes (1-212) 648-6752

RETAILING:
Europe –
Toby Radford (44-71) 325-4064
Lisa Winey (44-71) 325-4983
Latin America –
Debra Wang Smith (1-212) 648-7493
Richard E. Long (1-212) 648-4796
United States –
Specialty Retailing–
Maura Hunter Byrne (1-212) 648-7966
Carolyn M. Morse (1-212) 648-6573
Supermarkets & Drugstores –
Mark Husson (1-212) 648-7859
Danielle E. Turnof (1-212) 648-8389
Sandhya Raju (1-212) 648-9114

STEEL:
Michael F. Gambardella (1-212) 648-7319
Brian C. McLoughlin (1-212) 648-4807

TECHNOLOGY:
Computer Systems –
Daniel Kunstler (1-415) 954-3230
Rahul Narang (1-415) 954-4752
Enterprise Software & Internet –
David Fox (1-212) 648-4833
Amit Jhalani (1-212) 648-6286
PC Software –
Sheryl A. Daniels (1-212) 648-9425
Semiconductors –
Terry Ragsdale (1-212) 648-9047
Peter Chan (1-212) 648-7323
Services & Networking –
William D. Rabin (1-212) 648-8894
Terrence Tierney (1-212) 648-9429
Charles A. Willhoit (1-212) 648-7146

TELECOMMUNICATIONS:
Asia –
David Barden (852) 2841-1166
Agnes Ho (852) 2973-5449
Europe –
Iain M. Johnston (44-171) 325-5056
Jonathan Adams (44-171) 325-4900
Sean Faughnan (44-171) 325-4877
Nick Delfas (44-171) 325-4779
Latin America –
Simon Flannery (1-212) 648-8317
Gillian Sandler (1-212) 648-6232
United States –
Wireline Services –
Simon Flannery (1-212) 648-8317
Margaret Berghausen (1-212) 648-9416
Wireless Services –
Kurt Abkemeier, CFA (1-212) 648-9468
Laura Baldwin (1-212) 648-6271
Michael Rollins (1-212) 648-6294
Telecommunications Equipment –
Gregory S. Geiling (1-212) 648-3320

UTILITIES & INDEPENDENT POWER:
Asia –
Melissa Brown (852) 2841-1386
Latin America –
Jonathan Arnold (1-212) 648-9474
United States –
Kyle P. Rudden (1-212) 648-9048
Ferdinand Cheuk (1-212) 648-6280

J.P. Morgan has recently acted as lead or co-manager in offerings of securities by AirTouch, AT&T, KPN, MCI, MFS, Nynex, PLDT, Tele Danmark and Teléfonica de España in the last three years.