The Private Equity Takeover of Telecom Infrastructure in Denmark: Implications for Network Development and Public Policy

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Abstract

The debate over the implications of private equity leveraged buyouts revolves primarily around one central issue, the extent to which private equity ownership promotes efficient long-term investment and operational management in the target firms, or the maximisation of short-term returns to private equity investors to the detriment of the target firm's long-term development. Supporters of private equity buyouts claim they introduce a longer term planning horizon for firms with public shareholders who have demanded that management be preoccupied with quarterly earnings improvements and short-term movements of the stock price. Critics claim private equity groups maximise the short-term cash value of the assets for payouts to investors and impose unsustainable debt structures that preclude investment in long-term growth opportunities. It would appear from the evidence to date that the objective of the leveraged buyout of TDC is not to invest in TDC's growth and development, but rather to withdraw as much cash as possible from TDC through the combination of special dividend payments, management and financing fees, and finally the sale of a much smaller residual company.

Keywords

Private equity ownership, leveraged buyouts, information society infrastructure, telecom operators

1. Introduction

On 1 February 2006, TDC, Denmark's incumbent telecom operator and by far the largest player in the Danish market, was taken over by a private equity group (PEG), the Nordic Telephone Co. (NTC) in a leveraged buyout. In the largest takeover in Europe at the time, for DKK 76 billion (about EUR 10.3 billion), the purchase of 88.2% of TDC shares was made with borrowed funds secured by TDC's assets. The new owners are a group of five private equity specialists: Apax Partners; Blackstone Group; Kohlberg Kravis Roberts; Permira; and Providence Equity. They did not claim that TDC is an inefficient company where significant profit can be made by fundamental reforms. In fact, they did not even claim to bring telecom industry expertise, and were extremely vague, if not evasive, about their future plans for TDC. They have stated only that they plan to change the

financial structure of the company, reduce operating costs where possible, maintain ownership for about five years and then sell it. They have not revealed who they think the potential target buyers of the company might be.

TDC owns the vast majority of both the telecom and cable television facility infrastructures in Denmark. It is the dominant services provider for all major services. It is a major reason Denmark ranks as one of the world's leading countries in developing the advanced infrastructure and services necessary for the next-generation Internet, e-commerce and an information society. A matter of concern is the commitment of the new owners to maintaining Denmark's leadership position. Are they interested in enhancing the build-out of next generation infrastructure networks and services as a foundation for a productive future information economy in Denmark? Will they be implementing and extending TDC's vision for becoming a more significant player in the European telecom market, which requires continuing major investment for benefits to be realised over the long-term? Or are they interested in the short-term goal of cashing out TDC's assets where possible, tax avoidance, and selling on the residual operation in a much smaller, debt-ridden, high-risk, investment-constrained company incapable of maintaining a leadership role even within Denmark, let alone Europe?

Private equity takeovers of companies by leveraged buyouts became significant in the US during the 1980s and more recently have expanded to Europe, including the Nordic region. They are viewed by some observers as a new competitive market force stimulating greater financial efficiency in the targeted firms; and by others as 'vultures' simply engaged in asset stripping by legal financial manipulation, and 'grasshoppers' moving across companies and countries. The experience to-date provides both success stories and failures. One must examine the specific circumstances to determine the likely consequences (Fenn et al. 1997).

What makes the TDC case distinct is that this is only the second time a PEG has taken over a national incumbent operator that provides the vast majority of a country's telecom facilities network, and is subject to sector specific regulation of its monopoly power and universal service responsibilities. Thus the consequences of this takeover for the Danish economy, and the government's ability to implement its telecom sector and information society policies, are far greater than takeovers of firms in general industry where the fate of a single firm will have little effect on the long-term development of an industry or a country's economy.

The Denmark experience with TDC, in turn, will be instructive for other countries where incumbent telecom operators may be potential targets for PEG takeovers. The financial press has noted increasing interest by PEGs in the telecom sector, as well as the public utility infrastructure industries more broadly – airports, transport, gas, electric and water utilities. This paper examines the TDC case and its implications for telecom sector and information society development in Denmark. For reference it reviews the only other European experience with a PEG takeover of an incumbent telecom infrastructure provider, *eircom* in Ireland. It does not examine the generic issues associated with the implications of PEG investment for the economy generally or the detailed implications

for taxation. However, this case study provides an input to that ongoing examination, and will be especially relevant for infrastructure providers in the telecom sector, and for the public utility infrastructure industries generally (Hall 2006).

2. Private Equity Group (PEG) Investment

PEGs provide an alternative form of investment. They assemble funds from a small number of investors, each committing a relatively large amount of funds. The investors include wealthy individuals as well as institutions, such as pension funds. The funds are managed by the PEG specialists. Although PEGs may invest some of their own funds, this is not a significant part of the investment. They make their money principally from management fees and a share of the returns. The standard fee structure is 2% of the assets under management and 20% of the returns to investors above a minimum hurdle rate. In leveraged buyouts, such as the case of TDC, these investor funds are used as leverage to borrow much larger amounts for the purpose of buying target companies that will assume the debt after the purchase.

PEGs are attracted to firms they regard as inefficient and ripe for profitable reforms. They seek to invest in firms in which majority or total ownership can provide significantly higher than normal returns as a result of proactive intervention in firm management, typically for a short period of time (three to five years). Value for the new investors is created by major intervention and restructuring activities, and the eventual sale of the firm. Unlike investors on the public stock market who have access only to public information without being able to directly influence the behaviour of the management, private equity managers can obtain valuable company information internally and direct the strategy and major decisions so as to maximise returns for the PEG investors (Melody 2006).

Private equity investments can be classified into a number of categories:

- venture capital, start-up businesses and early stage companies;
- expansion (or growth) capital, for later stage company initiatives;
- management buyouts; and
- management buyins.

Each market segment corresponds to specific company profiles or situations, uses differing financial structures and is distinguished by different holding periods for investments and performance criteria. Venture capital, start-up businesses, and expansion capital investment all provide new investment capital to develop or expand the business in anticipation of good returns on these investments from the expansive surge of rapid growth. Private equity capital is often used to launch new firms, which after demonstrating success then issue public shares.

Management buyouts are PEG investments made in cooperation with the existing management of the target company. Management buyins occur when the PEG brings in a new management team, sometimes in hostile takeovers resisted by the incumbent management. These forms of PEG investment are distinguished from venture and

expansion capital investments by the fact that they typically do not inject new capital for investment by the targeted firm for its growth. Rather they typically borrow most of the funds to leverage the buyout against the target firm's assets, and provide returns to the PEG investors by withdrawing capital from the targeted firm and then selling on the restructured, residual firm either to new private or public investors. The potential benefits arise from the conversion of an inefficient firm to an efficient one, with the efficiency gains drawn off for the PEG investors.

The case of TDC is a leveraged buyout with the cooperation and continuation of TDC management. This is the type of PEG investment that has stimulated most of the controversy over whether it is an innovative and efficient form of financing, or simply a means to facilitate asset stripping and tax avoidance that is a parasitic threat to efficient firms and efficient resource allocation in the economy. Concerns have been raised at two levels. One is investor protection. Many investors in PEG leveraged buyouts, including pension funds, are not generally aware of the higher risks they are assuming when investing in PEGs. A second is the broader effects of growing private equity financing upon overall risk and stability in an economy with much higher debt and leveraged financing than has existed previously (Cook 1998).

This paper is primarily addressed to a third concern, the implications of leveraged buyouts of major public utilities that provide the infrastructure for the economy, and have special rights and privileges granted by government that are associated with public service requirements and public interest obligations. In these circumstances, leveraged buyouts may significantly affect the economy served by the public utilities, and the effectiveness of implementation of government social policies. TDC provides a case study.

3. Criteria for Assessing PEG Stewardship of Target Firm Resources

The debate over the implications of PEG leveraged buyouts revolves primarily around one central issue, the extent to which PEG ownership promotes efficient long-term investment and operational management in the target firms, or the maximisation of short-term returns to PEG investors to the detriment of the target firm's long-term development. Supporters of PEG buyouts claim they introduce a longer term planning horizon for firms with public shareholders who have demanded that management be preoccupied with quarterly earnings improvements and short-term movements of the stock price. Critics claim PEGs maximise the short-term cash value of the assets for payouts to investors and impose unsustainable debt structures that preclude investment in long-term growth opportunities. These competing claims can be tested in specific circumstances by some standard indicators that can show the extent to which specific PEG takeovers are promoting long-term investment or short-term cash conversions for payout.

3.1 Short-Term Allocation of Internally Generated Capital

Perhaps the most significant indicator of the short-term effects on the management of the target firm's financial resources is the changes introduced by the new PEG owners with respect to new investment in replenishing its depreciating assets and expanding the business. The target firm generates capital internally from its operations that is accounted for in its income statement as asset depreciation and earnings. These represent funds generated from operations that are available for new investment in the current period, retention for future investment, dividend payments or paying off outstanding debt. One can compare the investment plans and practices of the target firm before and after PEG ownership. Is the firm reinvesting its internally generated funds, 1) to replenish its depreciated assets, or 2) to grow from investment of its earnings?

3.2 Capital Structure, Financial Risk and Sustainable Investment Capacity

3.2.1 The Debt Ratio

A firm's capacity to invest is determined not only by its capability for generating funds internally from its operations, but also by its capacity to attract external funding from the debt and equity markets. A firm's long-term investment capacity is influenced heavily by its financial structure. A firm with good earnings and little debt has a large capacity to attract both equity and debt capital for long-term investment. A high debt ratio indicates that significant interest and financial expenses must be paid, which reduces earnings and increases financial risk. There is little or no remaining capacity for raising new funds for long-term investment. One can compare the long-term investment capacity of the firm before and after PEG ownership by examining the changed financial structure in light of industry standards for an efficient financial structure that will support sustainable long-term investments.

PEG leveraged buyouts dramatically increase both the amount and the proportion of debt in the target firm's financial structure. This raises an important question as to whether the debt level prior to the takeover was inefficiently low or whether the debt level after the takeover is inefficiently and unsustainably high. As a foundation for efficient long-term growth, the optimal proportion of debt in a firm's capital structure will vary depending on different risk profiles in different industry sectors, and the different positions of firms in those industries. It will also vary with the level of interest rates that must be paid on the debt and general economic conditions.

As most of the incumbent telecom operators of Western Europe have a great deal of similarity in terms of their historical development, market positions and financial structures, they tend to be assessed by the same standards. Most European incumbent telecom operators have sought to have *debt ratios between 30 and 50% of total capital* (debt plus equity), with variations from year to year depending on whether capital was being accumulated for a major investment, a major investment had just been made, or new debt just issued. Short-term deviations from this broad norm have led to the adjustment of financing practices to achieve stability for continuing growth around this standard.

3.2.2 Net Debt/EBITDA Ratio
Another common financial standard widely used to judge the appropriateness of the amount of debt carried by a company is the relation between its earnings from operating activities (revenue minus operating expenses), which is before interest, taxes, depreciation and amortisation (EBITDA), and its net debt. EBITDA measures the cash flow generated from the operating activities. It is used to pay interest and taxes, provide income and pay off debt.

The relationship between net debt and EBITDA measures the extent to which the debt can be supported by the firm's cash flow from operations on a continuing basis. For incumbent telecom operators in Europe, *the appropriate net debt/EBITDA standard seems to be about 2.5.* If net debt rises significantly higher than 2.5 times EBITDA, it is likely to compromise the firm's long-term growth capacity, increase its financial risk to an unacceptable level, and raise interest and financing costs. Cash flow will have to be used to pay high financing costs rather than be invested in growth. If cash flow is lower than 2.5, the firm has a sustainable, long-run investment capacity reserve. It could expand debt efficiently to fund additional sustainable, long-term growth.

France Telecom provides a good illustration. For 1998 and 1999 its financial reports show a debt ratio of 44% and net debt at 1.5 times EBITDA, indicating an investment capacity reserve that could fund long-term growth opportunities. After several major investments at inflated prices during the dot.com stock market boom, in 2000 its debt had increased to 65% of capitalisation and 5.6 times EBITDA. It had passed the boundaries of efficient and sustainable financial management. Its credit ratings were lowered. Discussions began about a possible rescue financial package from the French government. In 2001, the company reassured financial analysts that it was committed to reduce its net debt/EBITDA ratio to below 2.5. Financial results for the following years showed reductions in the net debt/EBITDA ratio to 5.1 in 2001, 4.9 in 2002, 2.7 in 2003 and 2.43 in 2004. Currently, in the UK, BT's ratio is 1.4, prompting the Financial Times to speculate on whether a large new investment is forthcoming.[1] Telenor's ratio at year end 2006 was 1.3, indicating capacity for continued sustainable long-term investments (Telenor 2007).

4. The *eircom* (Ireland) Experience[2]

There is one EU country where there is experience with a PEG takeover of an incumbent telecom operator. The former national operator in Ireland, now called *eircom,* is the principal provider of fixed-line telecom services with a 75% share of fixed line revenues, and an even greater share of infrastructure network facilities. It is the designated universal service provider.

When *eircom* was privatised by the government in 1998, it was relatively inefficient in comparison to incumbent telecom operators in Europe, and in need of significant infrastructure investment. The shares were offered to the public and purchased by a wide cross-section of Irish citizens. In late 2001, the Valentia private equity consortium acquired *eircom* with a leveraged buyout. After the acquisition *eircom* repaid Valentia

debt by issuing bonds which increased its debt from about 25% to 70% of its capital structure. Its net debt/EBITDA ratio increased from less than one to more than three. It was transformed from an operator with a large sustainable (but unused) long-term investment capacity reserve, to one with a financial structure that was unsustainable for long-term investment. This is borne out by *eircom*'s activity after the takeover.

Capital expenditures for *eircom*'s network expansion declined dramatically from about EUR 600 million per annum in 2000 and EUR 700 million in 2001 before the Valentia takeover, to EUR 300 million in 2002 and EUR 200 million in 2003 and 2004. During 2000 and 2001, immediately before the Valentia takeover, *eircom* invested all its internally generated cash flow from depreciation allowances plus another EUR 475 million from its retained earnings: *eircom* grew. There was network development.

Between 2002 and 2004, after the Valentia takeover, *eircom*'s investments were EUR 450 million less than its internally generated cash flow from depreciation allowances. It did not invest enough even to replenish its asset depreciation. This provided funds for payment of a EUR 400 million special dividend – really a payout of part of *eircom*'s capital base – to Valentia. Not surprisingly, *eircom*'s telecom infrastructure did not improve significantly and Ireland fell even further behind most European countries in its telecom network development.

A second public stock offering was successfully floated in 2004 at a significant profit to Valentia. Public investors in Ireland apparently retained faith in their national operator. During the ensuing 2004-2006 period of publicly held stock ownership, the financial structure did not change, and *eircom*'s 70% debt ratio was maintained. Capital expenditure stayed at the relatively low level of EUR 200 million in 2004 and 2005 and increased slightly to EUR 250 million in 2006. This was significantly less than the cash flow generated by its depreciation allowances. Investment capacity was severely constrained by *eircom*'s high financing costs and high debt ratio.

In 2006, the Babcock and Brown PEG from Australia purchased *eircom*, again through a leveraged buyout. Through a complex holding company structure, ultimate ownership is traced to the Cayman Islands. *eircom* debt has now mushroomed to EUR 3.8 billion, more than 80% of its total capital and supported by assets of only EUR 3.1 billion. Its net debt/EBITDA ratio has ballooned to 6.9, and its average cost of debt has increased to more than 8% (Leavy 2006). Although the new owners have announced their intention to invest in upgrading the *eircom* network to European broadband standards, *eircom*'s capacity to invest significant amounts seems virtually straight-jacketed. The new owners have requested the government to contribute funds to support universal service in rural areas, and have indicated that pricing policies for *eircom*'s basic monopoly services will need to be reviewed.

According to statistics on broadband penetration per capita in EU countries in the first quarter of 2006, Denmark ranks first at 29.3%. The EU average is 14.1%. Ireland ranks 17th at 8.0%, between Slovenia and Lithuania. Of the original EU-15 countries, Ireland only ranks ahead of Greece (ECTA 2005). Given *eircom*'s experience, its present

ownership and its financing structure, it is difficult to see how it could improve its telecom infrastructure to European standards in the foreseeable future.

5. TDC in Denmark[3]

5.1 History

TDC is the former national operator in Denmark. TDC (formerly TeleDanmark) was created by the amalgamation of regional partly government-owned operators. It was partly privatised in 1994 with the sale of shares to the public, and fully privatised in 1998 when the government sold its remaining shares to the US regional operator, Ameritech, which was then taken over by SBC (now renamed AT&T). In contrast to Ireland, Denmark and the other Nordic countries have always been European leaders in the provision of efficient telecom services over technologically up-to-date networks providing virtual universal service coverage (Henten and Wulff 1996).

Even before the creation of TeleDanmark, equipment manufacturers often chose Denmark to test new equipment with cutting-edge users and state-of-the-art networks and services. Research and development, innovation and experimentation with new services were important activities in maintaining Denmark's leading position. A commitment to excellence in staff training was evident in TeleDanmark's participation and support for both internal and external programs. This began to change when SBC took control. R&D and training activities were cut back significantly as SBC decided it could provide most of TDC's needs from the US. SBC sold its shares on the public market in June and November 2004, leaving the future direction of TDC entirely in the hands of its management as TDC then no longer had a dominant shareholder. The owners were a widely diversified body of small institutional and retail shareholders.

For some time TDC has described its vision as:

> …to strive to be the best provider of communication solutions in Europe.
> To realize the Vision we will focus on:
> - consistently delivering customer value through customer focused solutions and outstanding customer care;
> - dedicated, enthusiastic and proud employees;
> - creation of outstanding shareholder value;
> - active and responsible participation in the development of society (TDC 2004: 3).

TDC has not only grown with the Danish telecom market, it has expanded into other countries, recognising that national telecom markets are steadily merging into European, and in some cases global markets. It has reported steady growth and paid a regular quarterly dividend since it was privatised. In 2003, the company provided special incentives for employees to purchase shares. In 2004, after SBC sold its shares, TDC management reported, "Our present major shareholders are Danish, British and American institutional investors, most with long-term investment strategies that contribute toward continuity at TDC" (TDC 2004:3).

As well as continuing dominance of the Danish market, where it owns both the dominant telecom and cable TV transmission and distribution infrastructure, TDC has expanded its investment portfolio to include significant holdings in nine other European countries, as well as Oman. In 2005, TDC purchased additional operations in Hungary, Sweden and Switzerland. It is also co-owner of several international partnerships covering services in other countries. At end 2005, it had 20,225 employees. Revenue stood at DKK 46.6 billion while net income was DKK 4.7 billion. International operations contributed nearly half of TDC revenues. Capital expenditures were about DKK 5.6 billion.

5.2 Performance Before the Takeover

TDC's performance before the takeover can be assessed by several criteria: 1) network and services development in its home market; 2) overall growth and performance as a player in the international market; and 3) effectiveness of its financial strategy.

5.2.1 Network and Services Development in Denmark

As indicated above, Denmark ranks at the top of the EU in terms of broadband penetration per capita, and TDC is the primary contributor to that ranking. Also, by a range of other indicators of network and services development published by the European Commission, the OECD and others, Denmark ranks high (EC 2006). But it must also be noted that Denmark has always ranked high – even before TDC in its current structure was established. Denmark's high ranking has been influenced significantly by government policies supporting widespread use of personal computers in business, schools and government, and encouraging the use of electronic information services at all levels of government, in addition to facilitating infrastructure development by TDC.

Denmark's high ranking has been influenced further by effective sector regulation by the National IT Agency (IT and Telestyrelsen), an acknowledged leader among European national telecom regulators, on issues of interconnection, access and universal service, which has fostered a degree of competition in some telecom markets that has not been realised yet in most European countries. Finally, it must be recognised that all the Nordic countries rank close together near the top of these comparisons, with leadership among them varying by the indicator selected and often changing. This intra-Nordic country competition seems to have helped bring about good results for all countries and their network infrastructure providers.

5.2.2 TDC Earnings Performance

Following its mission, TDC has expanded into European telecom markets with significant investments in recent years to the point where almost half its revenue comes from its international activities. The measure used by TDC to assess the earnings performance of the different segments of its business is EBITDA cash flow, for which TDC's target is to realise an EBITDA for its services and investments of 30% of revenue.

TDC's recent experience is shown in Table 1.

Table 1

TDC Earnings by Segment 2004-06

EBITDA/Revenue (percent)

Segment	2004	2005	2006
TDC Solutions	31.6	30.7	32.0
TDC Mobile International	17.7	17.5	18.6
▪ Domestic	31.3	30.8	30.0
▪ European	7.5	6.8	8.6
TDC Switzerland	25.4	27.0	27.6
TDC Cable TV	19.9	22.3	25.1
TDC Group	28.3	27.9	28.8

Source: Calculated from data reported in TDC Annual Reports 2006, 2005, 2004.

Table 1 shows that TDC's domestic fixed and mobile network operations have been performing very well, slightly exceeding its target of an EBITDA/revenue of 30%. Its international investments and domestic cable operations have not provided adequate earnings. When depreciation and financial costs are also considered, the European mobile operations are suffering a significant deficit. These financial results are surprising in the sense that TDC management have frequently claimed that TDC's domestic services are not realising reasonable profit levels because of Danish telecom regulation. The data show that it is actually its international operations, not its domestic operations, that are restricting TDC earnings.

5.2.3 TDC Performance in the 'Nordiske Telekrig'

With respect to TDC's comparative performance with other incumbent telecom operators, the most appropriate benchmark is Telenor, which was designated by TDC as its principal competitor in the so-called 'nordiske telekrig' (Nordic telewar) many years ago. TeliaSonera, the merged Swedish-Finnish operator, is less directly comparable and has a much shorter period of relevant data. A detailed comparison of the performance of TDC and Telenor has been published by Jakob Skouboe in an article in the business section of the Berlingske Tidende (Skouboe, 2006). Some of the indicators from that comparison are presented in Table 2.

Table 2
Performance Indicator Comparison: TDC and Telenor
(DKK, billion)

Indicator	Telenor		TDC	
	1998	**2006***	**1998**	**2006***
Revenue	28.4	87.8	35.7	46.7
EBITDA	8.4	32.0	10.4	13.4
EBITDA (%)	29%	36%	29%	29%
Equity	17.7	59.0	20.2	1.8
Net Debt	10.4	48.4	8.0	56.7
Net Debt (%)	37%	45%	28%	97%
Investments	7.2	27.7	8.6	8.3
Fastnet Customers, m	2.9	3.2	3.5	3.7
Mobile Customers, m	1.7	58.7	1.0	9.7
▪ **Domestic**	1.6	2.7	0.9	2.7
▪ **International**	0.1	56.0	0.1	7.0

* Year ending after 3Q 2006.

Source: Skouboe 2006.

The data in Table 2 demonstrate the vastly superior performance of Telenor over the almost eight-year period of comparison on all performance indicators. As measured by revenue, Telenor has grown from 20% smaller than TDC to almost twice as large. Its EBITDA has grown by four times in eight years, while TDC's has grown by 30%. Telenor's EBITDA percentage of revenue has increased from 29 to 36%, while TDC's has remained unchanged at 29%. Telenor's annual investment has almost quadrupled, while TDC's has remained constant. Telenor's explosive growth has come primarily from its international mobile investments, while TDC's international mobile investments have not provided satisfactory returns. Skouboe also notes that Telenor's stock price has increased at a far faster rate than TDC's stock price during this period.

The data suggest that Telenor has done a far superior job at adapting to the international opportunities as telecom markets have become liberalised and globalised. TDC may now have as many international as domestic customers, but Telenor has ten times as many. Skouboe observes that the difference can be explained by the coherent long-term strategy of Telenor in entering specific international markets where synergy benefits can be realised, and the short-term piecemeal strategy of TDC, for which significant synergy benefits have not been realised. Telenor has grown to become a major international

player in telecom markets as the ninth largest telecom operator in the world. TDC currently ranks 30th and appears to be losing ground in the ranking.

5.2.4 TDC Management and Financial Strategy

TDC performance is influenced significantly by the effectiveness of its financial strategy. Its financial condition shows its capacity for pursuing investment opportunities efficiently. TDC financial indicators for the years 2000 to 2005, before the PEG takeover, and for 2006, the first year after the takeover, are shown in Table 3.

The indicators show stability, slow growth and significant cash flow from operating activities. As EBITDA cash flow has grown from DKK 9 to 13.7 billion per annum between 2001 and 2006, capital expenditures have declined from DKK 9.3 to 5.3 billion. Until 2002, capital expenditures exceeded the annual depreciation allowance. From 2003 to 2006, they have been less than depreciation by DKK 4.8 billion.

Like many incumbent telecom operators in Europe, TDC increased its debt significantly in 2001 to help fund a major expansion (primarily the acquisition of TDC Switzerland) that had a strong negative effect on net income and other financial indicators. Its net debt tripled to DKK 33.1 billion, 50% of capitalisation, and 3.7 times EBITDA. By these measures, TDC had slightly exceeded the maximum debt appropriate for sustainable long-term investment suggested by the 50% debt ratio and the 2.5 times EBITDA guidelines. Apparently TDC management paid attention to these guidelines, as net debt was steadily reduced between 2001 and 2005 to DKK 16.5 billion.

Table 3 shows annual calculations of the sustainable long-term investment capacity of TDC for each year, applying both the 50% debt ratio and the 2.5 times EBITDA guidelines. Thus, in 2000, TDC could borrow an additional DKK 24.1 billion under the 50% debt ratio guideline, and an additional DKK 15.5 billion under the 2.5 times EBITDA guideline, before reaching a debt level that could compromise long-term financial sustainability. These conditions justify TDC's taking on the additional DKK 22 billion in debt for its expansion program in 2001. But the negative calculations for 2001 [(0.4) and (10.6)] demonstrate that any further increase in debt might not be sustainable for the long-term.

As TDC reduced its net debt over the next several years, it again built up an investment capacity reserve, and by 2005 the sustainable long-term investment guidelines again showed a large reserve (DKK 16 and 27 billion). The data indicate that by the end of 2004 and 2005, TDC was well positioned for another major investment, especially with the very low interest rates available for new debt.

Table 3

TDC Financial Indicators
(2000-2006, DKK, billion)

	2000	2001	2002	2003	2004	2005	2006
Revenue	34.8	40.8	40.7	40.2	42.3	46.6	47.4
EBITDA	10.6	9.0	10.2	11.1	12.0	13.0	13.7
Depreciation	4.4	6.6	6.1	6.2	6.7	6.8	6.6
Net Income	3.6	0.7	3.3	4.1	3.9	4.7	3.4
Cash Flow-Operating	7.4	4.0	9.9	10.7	11.1	8.7	10.1
Assets	67.7	86.4	85.0	92.6	90.3	93.5	80.8
Capital Expenditures (excluding share acquisitions)		9.3	6.3	5.4	5.1	5.6	5.3
Equity	35.1	32.7	36.0	35.9	38.9	43.8	3.6
Net Debt	11.0	33.1	26.0	28.8	20.0	16.5	55.2
Net Debt (%)	24%	50%	42%	45%	34%	27%	94%
Net Debt/EBITDA	1.0	3.7	2.5	2.6	1.7	1.3	4.0
Sustainable Long-Term Investment Capacity:							
50% Debt Guideline	24.1	(0.4)	10.0	7.1	18.9	27.3	(51.6)
2.5 X EBITDA Guideline	15.5	(10.6)	(0.5)	(1.1)	10.0	16.0	(21.0)

Source: Data from TDC Annual Reports. Author's calculations.

The TDC Annual Report for 2005 explains in some detail the considerable effort undertaken by TDC to manage optimally its market and financial risk disclosure on a daily basis, applying sophisticated statistical models and expert advice. It concludes:

> It is TDC's opinion that, provided the current financial strategy is continued, the available cash, marketable securities, interest-bearing debt, interest-bearing receivables and undrawn committed credit lines are sufficient to maintain current operations, complete projects underway, finance stated objectives and plans, and meet short-term and long-term cash requirements (TDC 2005: 45).

6. Assessing the TDC Takeover and New Direction

Thus far the PEG takeover of TDC has been a textbook case of the successful implementation of a leveraged buyout that can provide enormous short-term returns to its investors and advisors. Activities undertaken to date by the new owners, and their announced plans for TDC, provide a reasonable foundation for an assessment of the probable implications.

6.1 Effects of the Leveraged Buyout on TDC's Financial Condition

> On 2 December 2005, Nordic Telephone Company ApS made an equity tender offer to the shareholders of TDC A/S. At the same time, TDC's Board of Directors issued a statement recommending that TDC's shareholders accept the offer. On 25 January 2006, NTC announced that the equity offer would be completed, as NTC owned or had received valid acceptances in respect of 88.2% of TDC's common shares. On 1 February 2006, NTC settled and paid for the shares and ADSs, thereby becoming the owner of 88.2% of the common shares. TDC is well equipped for the future (TDC 2005: 3).

A much higher degree of transparency is available about the PEG takeover of TDC than normally occurs on leveraged buyouts because the buyers failed to attract the 90% of shares necessary to de-list the stock from public trading and public reporting. This was due primarily to the resistance of the ATP pension fund, and many current and former employees preferring to hold the stock for their pensions rather than sell it and pay tax on a short-term capital gain. NTC has taken this issue to the Danish court, seeking authority to force the holdout shareholders to sell their shares so TDC can be de-listed. The court has confirmed the status quo awaiting its decision.

The TDC takeover was financed by slightly more than 80% debt. Capital management fees are not specified. If a common industry rule of thumb applies, they will be about 5% of the value of the takeover, or approximately DKK 4 billion. A new holding company structure was created for the purchase of TDC. The Nordic Telephone Company Holding (NTCH) was established as a "finance company and investing business" and to hold shares in NTC. NTC purchased the shares of TDC. NTCH in turn is owned by the Nordic Telephone Company Finance (NTCF), which is owned by the Nordic Telephone Company Investment (NTCI), the ultimate Denmark holding company in this structure. NTCI is controlled by the investment funds managed by the PEG firms.

Significant downgradings of TDC's credit rating by the Standard and Poor and Moody investor services occurred; first on 30 November 2005 when NTC announced it was making a tender offer for TDC; and again on 25 January 2006 when it was announced the offer would be completed. The downgradings reflected the fact that TDC would have to absorb the NTC debt that would be incurred to purchase TDC. The initial effect of the purchase raised TDC's debt ratio from 27% to more than 80% of total capital, far above acceptable levels for sustainable long-term investment capacity. New high yield bonds were issued in April 2006 in euro and US dollars at interest rates between 8 and 9%, far higher than prevailing rates for secure corporate debt. This significantly increased TDC's financial expenses and risk. It reduced the market value of TDC debt that had been issued before the takeover at lower interest rates reflecting TDC's then less risky financial structure.

On 5 April 2006, TDC declared a special dividend of DKK 219.50 per share. The total payout was DKK 43.481 million, more than 57% of the share price paid by the new

owners, about 47% of TDC total assets, and more than twice the equity investment of the NTC investors. It was funded by TDC's cash reserve, sales of some of TDC's investments in other countries, and additional debt. This was a breathtakingly large payout of about half TDC's total capital.

The Chief Executive Officer (CEO) and Chief Financial Officer (CFO) of TDC have been awarded special bonuses by the new owners far in excess of their normal pay levels, presumably for their performance in facilitating the takeover. The bonus payments were sufficiently high to attract ongoing media attention for months about how this could be justified by any standard for Danish market determinations of executive pay levels. NTC has promoted TDC's CEO to Chairman of the Board, and the Chief Financial Officer is staying on, both at higher pay levels.

The new CEO of TDC has announced his assessment that he does not see synergies in TDC's international holdings and expects to be selling most of them. TDC will scale down and concentrate on its core businesses in Denmark and the Nordic region. TDC expects to fall from its current 30th position on the ranking of the world's telecom operators to between 45th and 50th. Planned ongoing staff reductions between 5-6% per year have been announced.

Table 3 shows that TDC's net debt has increased to DKK 55.2 billion in 2006, while equity investment has been reduced to DKK 3.6 billion. The debt ratio is now 94% of total capitalisation. Applying the sustainable long-term investment capacity guideline of 50%, TDC has a deficit of DKK 54.7 billion. But as this extraordinarily high debt ratio is 'off the chart', this standard may not provide the best estimate. Applying the 2.5 times EBITDA guideline to TDC's estimated EBITDA for 2006, the deficit is DKK 21 billion.

However, as TDC is the only revenue producing investment of NTC and NTCH, the most appropriate data for financial analysis is that of NTCH. For 2006 NTCH had DKK 69.8 billion in net interest-bearing debt, a debt ratio of 82.8%, and a net debt/EBITDA ratio of 5.1.[4] This yields a sustainable investment capacity deficit between DKK 35.7 and 55.3 billion for NTCH. Clearly these financial arrangements are unsustainable for long-term growth and development.

TDC's 2006 Annual Report states,

> Following the acquisition of TDC by NTC and the subsequent change in capital structure, the interest and exchange rate risks to which TDC is exposed have increased. The new financing includes several financial covenants and undertakings to which TDC must adhere. Further, for NTCH to meet its debt service requirements on its high yield bond debt, TDC must be able to pay out sufficient dividends on a current basis. TDC's financial strategy has been revised and altered to accommodate these new requirements (TDC 2006: 60).

With respect to debt management, the Annual Report continues,

> To reduce refinancing risk, the maturity profile of the debt portfolio is spread over several years. Therefore TDC does not have significant debt positions to be refinanced in the coming years. A revolving credit facility of DKK 5.2bn is sufficient to handle the refinancing risk (TDC 2006: 60).

Yet, the maturity profile of the new TDC debt is dominated by two tranches of senior facilities representing DKK 36.8 billion, or 63% of the current total net debt. They are "repayable as a bullet in 2014 and 2015, respectively" (TDC 2006b: 6). The NTCH Annual Report documents an additional debt issue of almost DKK 15 billion due in 2016, concluding " DKK 51.7bn or 71% of the total nominal debt falls due in 2014, 2015 and 2016" (NTCH 2006:28). This will be long after the new owners and managers expect to have exited TDC.

With this overloaded financial structure, TDC will no longer be able to adapt its financing policy to support the investment requirements and opportunities for its telecom operations. Rather, the telecom operations will have to be managed to generate large cash flows to support the very expensive, highly restrictive and risky financial arrangements. Moreover, this will continue indefinitely. TDC's future from 2014 will be influenced significantly by the prevailing level of interest rates at that time. If they are significantly higher than they are at today's historically low rates, refinancing will be significantly more expensive, or not possible, and TDC could be faced with a financial crisis and seek a 'rescue package' from the government.

6.2 Disinvestment and Obsession with Short-Term Cash Flow

It would appear from the evidence to date that the objective of the leveraged buyout of TDC is not to invest in TDC's growth and development, but rather to withdraw as much cash as possible from TDC through the combination of special dividend payments, management and financing fees, and finally the sale of a much smaller residual company. The challenge for the PEG managers then is to find the highest value combination of cash payouts by restructuring TDC finances, investments and operations. There is no evidence of long-term future commitments or planning.

The funds received from the DKK 40 billion increase in net debt imposed on TDC were used for a capital payout in the form of a DKK 43 billion special dividend, so the new owners could pay down the debt incurred to buy TDC. There has simply been a massive reallocation of TDC's resources and obligations to the benefit of the new owners and their financiers, and the unnecessary expenditure of large amounts on unnecessary financial transaction costs.

Experience with leveraged buyouts elsewhere suggests that this is only the first step in the cashing out process. Because TDC had significantly reduced its net debt in 2004 and 2005 by DKK 12.3 billion before the takeover, there may still be room for more high-yield, high-risk borrowing. TDC's net debt/total assets ratio has increased from 18% to 72%. This is about the level of *eircom* in Ireland after its first PEG takeover by Valentia. The recent second takeover of *eircom* by Babcock and Brown has been able to run up the

debt to assets ratio to 117%. So there may be opportunities for issuing additional TDC debt for cash to pay out to the new investors. Running up an excessively high debt ratio to make cash payouts to investors today is reversing the normal flow of funds for investment. It is borrowing against cash flow in future years to make cash payouts today that will severely constrain TDC's future investment opportunities.

6.3 Cashing Out TDC's International Investments
From the perspective of the new investors, TDC can be seen as an investment portfolio that is to be restructured and sold for maximum value – first, TDC's corporate investments, and then TDC's restructured operations divisions as the core investment.

The international investments are about 40% of the company, primarily TDC Switzerland and international mobile investments. According to TDC reports, the investments were made because there were anticipated synergy benefits to be gained, primarily in applying TDC's superior specialised telecom skills and strategic management capabilities to achieve economies and competitive advantage in countries that were not as advanced or efficient as Denmark. As noted above, the anticipated financial benefits have not as yet materialised. A reassessment of those investments on a case-by-case basis to determine the best course of action for each in relation to TDC's long-term development plans is appropriate. But that is not what is proposed by the new management. TDC's new CEO has stated that everything is up for sale.

If the new owner, NTCH, wishes to maximise the cash payout, its investment in TDC may require some restructuring before sale and some time to attract the best buyers and get the best prices. Also, NTCH needs to be aware of the potential impact of these sales on the value of the restructured residual TDC company, which is the highest value investment in the portfolio of TDC assets, will be sold last, and must be minimally financially sustainable. The portfolio management of TDC investments may require some buying as well as selling over the next few years as TDC is restructured and positioned for sale at maximum value. For example, during 2006, TDC has purchased the Esbjerg Municipality's cable TV and Internet assets and activities, which will strengthen TDC's dominance over the communication infrastructure and in cable TV delivery in the Danish market.

As a rough rule of thumb, one might estimate the sale value of TDC international investments as follows. Assume they represent about 30% of TDC asset valuation, and they can be sold at market prices averaging about 160% of their book value. (NTC paid a market value of about 180% of book value for TDC ownership.) This rough estimate yields about DKK 50 billion from the sale of TDC's investments.

Assuming the cash from the sale of TDC's investments is paid directly to the new owners, the residual company would be reduced to TDC Solutions, TDC cable TV and domestic mobile divisions. Based on TDC's 2006 Annual Report, TDC's EBITDA cash flow from these divisions available to pay interest expenses, financial fees and incidental cash expenses would be reduced from DKK 13.7 to 9.9 billion. If one assumes an average interest rate of 8.5% on the current outstanding DKK 55.2 billion net debt, the annual

interest expense would be DKK 4.7 billion. This leaves a margin of three billion in cash flow to cover additional debt inherited from the international companies that were sold. The sales of TDC investments will take place over the next few years, when TDC's EBITDA cash flow from its core activities can be expected to increase slowly, but steadily. Paying out the cash received from the sale of TDC's international investments as they are sold should be readily manageable.

6.4 Cashing Out the Residual TDC Company

A second major activity, being undertaken in parallel with the first, is making changes in the core TDC operations to ensure they generate the maximum cash flow in the short-term while leaving a 'lean and mean' minimally sustainable core operation for the final sale. In the trade this is known as 'sweating the assets'.

The residual TDC is likely to include the TDC Solutions, cable TV and domestic mobile divisions. These are primarily the networks for telecom and cable services in Denmark, in which TDC has significant monopoly power over the facility networks and a dominant market position for most services.[5] These activities also must be restructured for maximum value before final sale.

TDC's EBITDA cash flow for 2006 for these three divisions totals DKK 9.9 billion. In these divisions, EBITDA cash flow is very stable and growing slowly. EBITDA can be increased by taking steps to expand revenue and/or decrease operating costs. Both are desirable, but building new markets tends to be an uncertain long-term activity, while reducing operating costs is a more controllable, more certain and more immediate activity. Hence, the priority short-term activities are sweating the assets and screwing down operating costs.

This means critically assessing all assets and all operating activities to determine their necessity and whether they are generating maximum short-term cash. Some of this activity may be intrinsically beneficial if areas are found where management has not paid sufficient attention to efficiency in the past. But most of it involves cutting back on investments and expenses that are needed for long-term growth and development, but do not generate sufficient cash flow to be justified in the short-term. This is sometimes labelled 'strict cost control'.

6.4.1 'Sweating the Assets' and Closing Off Long-Term Investment Opportunities

Short-term cash flow is maximised if all TDC assets are critically examined to assess if they are essential and generating as much cash flow as possible, as soon as possible. The assets are made to work as hard as possible to meet this objective; thus, the term 'sweating the assets'. This can lead to the selling of assets to generate cash. Assets not essential to the provision of service over the next few years can be sold as unnecessary. Buildings that are owned can be sold and leased back, generating cash now but increased expenses over the long-term. Even TDC central offices and transmission lines could be sold to financial interests and leased back, generating cash now. Employee pension funds can be reassessed under favourable expectations for future returns on the pension investments to create surplus capital that can be cashed out. Public assets that

traditionally have not been valued as assets, such as rights-of-way for the fixed networks, and special rights, such as the power of eminent domain, can be reassessed to justify increased asset valuations as security for additional loans and cash payouts.

With its five-year (now four) ownership window, NTCH has no financial incentive to invest in new assets that require significant financial commitments for the benefit of future services, revenue and profit after the ownership period. To illustrate, there are likely to be more auctions for spectrum for new mobile communication services during the next four years that could raise an important test of TDC's short-term incentives. Spectrum licences require payment of a large investment up front as a fee for the licence, more investment over a one- to three-year period in infrastructure construction and development, and then several years of market development before significant returns begin to be realised. Then, good returns are expected for a considerable period.

TDC is depreciating its recently obtained UMTS (3G) spectrum over 16 years. Although ownership of spectrum licences for future services would increase the selling price for the residual TDC company, it is unlikely to justify the up-front investment in terms of net cash flow generated within the first four years. NTCH's short-term ownership and planning horizon essentially puts TDC out of action in terms of significant long-term investment for its period of ownership.

6.4.2 Research and Development (R&D)

One example of the conflict between short- and long-term incentives is R&D, especially in an industry driven by continuing major technological changes, new services and markets. TDC has been cutting back on R&D for several years before the takeover. The 2006 Annual Report does not identify R&D expenditures. The only mention in the 2005 Annual Report is a sentence in the notes stating R&D expenditures were reduced from DKK 28 million in 2004 to 23 million in 2005. This is one-twentieth of one percent of TDC revenues.

This does not seem consistent with the TDC vision statement and raises a question of how the new owners and management plan for TDC to survive in the long-term in an industry characterised by continuous technological change and innovation. Without a significant R&D program, it is difficult to envision how TDC could be a viable independent operator in the European market, let alone be "the best provider of communication solutions in Europe." Perhaps this is related to TDC's inadequate financial performance in recent years. For comparison, Telenor's R&D expenditures for 2006 were NOK 500 million (Telenor 2007).

6.4.3 Universal Service Obligations

Another example of the conflict between short- and long-term incentives is the nature of TDC's commitment to meeting the universal service requirements of Denmark. In the Internet era, these are expanding from basic telephone service to broadband access to the Internet. Denmark may be leading Europe now with a per capita penetration rate of more than 30% (end 2006) at low broadband speeds. But there is still a long way to go before universal access is achieved in a fully converged fixed-mobile communication

environment at higher broadband speeds. Several European countries are now moving ahead more rapidly than Denmark.

Meeting universal service requirements will be far more difficult, more expensive, and take longer after the new owners have sold TDC leaving a debt mountain that constrains long-term investment and social investment in particular. During the five years of NTCH ownership, one can expect this public service obligation to get the minimum of investment, and be avoided entirely where possible. One can expect a similar minimal investment for special services for the disabled and for other social obligations that drain cash flow.

6.4.4 Employee Resources

The primary area of strict cost control relates to employees, their training and long-term professional development. The new owners have an incentive to focus on employee productivity for short-term cash flow generation, not on staff that are working on long-term activities such as R&D, or on company-wide staff professional development. The purpose is to screw down operating costs to a minimum. In its publications, TDC makes much of its commitment to its employees, but this does not appear to be borne out by its treatment of them.

In November 2003, TDC established an employee share ownership program and offered employees the option to purchase up to 90 shares of TDC stock at DKK 100 per share. More than 80% of those eligible, or 12,509 employees, purchased 1.1 million shares. The 2003 Annual Report stated:

> TDC's employee share ownership program aims to motivate employees and encourages their long-term interest in TDC's stock market performance. … The program is one way to clearly signal to our employees that they are the key to successful future value creation for the Group (TDC 2003: 15).

Two years later, when the NTC takeover was proposed, most employees and former employees wished to keep their shares, which they had purchased as long-term investments, but were strongly encouraged by TDC management to accept the NTC tender offer. The employee shareholder's acceptance of NTC's tender offer was conditional upon NTC irrevocably putting into effect a compulsory redemption of outstanding shares in TDC by 1 December 2006. As this was not achieved, the shares have now been returned to the employees and NTC's ownership share has been reduced from 88.2% to 87.9%.

It seems the long-term interest of TDC employees expressed in TDC's vision was superseded by the short-term interest of NTCH. Employee relations certainly would be much better if NTCH had invited employees to keep their shares. Sharing 0.3% of the cash payouts from the TDC takeover with employees surely would not upset the NTCH financial plan, and would have provided a financial benefit to the staff. In Ireland, the employees owned a significant number of shares after *eircom* was privatised. Employees had a 20% share in the Valentia consortium in the first private equity takeover, and

shared in the very high cash payouts. They now hold a 30% share in the Brown and Babcock takeover (Leavy 2006).

The senior executives of TDC have been treated differently, and have been given an opportunity to share in the forthcoming cash payouts from TDC.

> Nordic Telephone Company Investment ApS (NTCI), which is the ultimate Danish holding company in the group of companies holding an ownership interest of app. 88.2% in TDC A/S, has informed TDC that 41 senior executives of TDC have accepted the invitation to invest in NTCI and that they have subscribed shares to a total amount of DKK 51.5m. The subscription amounts to 4.3% of the ordinary share capital of NTCI.[6]

Ownership of these shares brings the incentives of TDC management fully into line with those of the other NTCI investors. TDC management will be rewarded on the basis of its performance and effectiveness in disbursing TDC cash for the benefit of the new investors and managers. The financial rewards to the 41 TDC managers from their 4.3% of NTCI shares will be many times the benefit to the 12,500 employees that 0.3% of TDC shares would have provided.

TDC has announced a planned reduction in staff of 5-6% per annum for the period of NTC ownership. Although the application of new technologies may justify reductions in staff to meet the needs of the current level of production, skilled employees can be reallocated to new opportunities if a firm is growing or expanding, especially if some investment in retraining is provided. However, this requires a commitment to long-term growth and new opportunities. There will be very few opportunities for professional development for most TDC staff. With a workforce of 20,000, a 5-6% annual staff reduction equates to about 1000 employees and a cost saving of about DKK 400 million per year. This directly increases cash flow for payment to NTCH, or for leverage to borrow more debt. For comparison, in 2006 a transaction fee of DKK 969 million and an administration and management fee of DKK 35 million were paid to the investors and their managers. NTCH also incurred net financial expenses of DKK 4.5 billion during its first 11 months of existence.

TDC has announced a program of cooperation with several of Denmark's largest companies to create new jobs for TDC employees to be fired as part of the planned staff reduction of about 1,000 per year. Telenor expanded its labour force, from both growth and acquisitions, by 7,000 during 2006, and has just expanded its Denmark operations with the purchase of Tele 2 Denmark. Telenor may provide good job opportunities with a telecom operator implementing a long-term vision with a significant new investment in the Danish market.

One must question why it is necessary for TDC to be cutting back its investment, its market development and its skilled staff in its home market when it has inherited a leadership position within Europe in one of the most dynamic and rapidly growing industries in the world. Is the only thing lacking a management capable of implementing the vision?

6.5 NTCH and TDC Management Issues

6.5.1 NTCH Management

NTCH is a finance and investing business, not a telecom enterprise. None of the executive nominees from the PEGs has telecom experience or even experience managing a company of any size. Even the name they selected for the company, the Nordic *Telephone* Company, reflects a charming innocence about the industry. All the old telephone companies changed their names long ago to reflect the fact that the telecom business was no longer just about telephones, but all forms of electronic communication. Telephone companies are history. For the new owners this is of no consequence, as NTCH and its affiliated companies are just organisational conveniences for a straightforward short-term financial play.

PEGs do not seek leveraged buyouts of firms they think are efficient and well-managed. There is little to be gained from efficient firms, and they are more likely to have management that is committed to the firm's vision of its long-term development, and therefore resistant to a leveraged buyout. Telenor would be an unlikely target. The PEGs must see significant inefficiencies that can be leveraged to enable large cash payouts in the short-term.

The above comparison of TDC with Telenor suggests that TDC may have been unimaginative in failing to respond very effectively to international market opportunities to date. But NTCH has shown no interest in pursuing these European and global telecom market opportunities. For NTCH's purpose of cashing out TDC's resources, the old TDC management can work well if it does what it is told and facilitates the takeover, the restructuring and the reselling. The takeover is particularly important as it is the most sensitive and significant activity that prepares the ground for restructuring and reselling.

The major attraction for NTCH undoubtedly was TDC's conservative financing policy, high cash balance and strong and steady cash flow. Although TDC management claimed in its 2005 Annual Report that its financing policy of reducing its debt to 27% of total capitalisation, 18% of assets and 1.3 times EBITDA cash flow, during a period of very low interest rates, was optimal for its long-term development, it is now evident that NTCH saw this as a major financial inefficiency upon which it could capitalise. An additional DKK 30 billion in debt could be issued at low interest rates and still leave TDC within range of the industry guidelines for sustainable long-term investment. This cash could be paid out to the new owners. Additional cash for payout could be generated by imposing a short-term view on management decisions as described above.

It is surprising that the same TDC management that defended its conservative financing policy at the end of 2005, is now happy to defend a financial policy at the other extreme of financial risk assumption. A sudden increase in debt by more than four times at significantly higher interest rates to a level that is more than 80% of total capitalisation and five times EBITDA cash flow is now an appropriate financing policy. The former TDC management has played an instrumental role in implementing this new high debt

financing policy. No explanation of the justification for the sudden dramatic change in financing has been provided.

It is also surprising that NTCH would keep the TDC management team to implement the internal restructuring before the sell-off of TDC investments, the sweating of TDC assets and the screwing down of operating costs. One would not expect the new owners to ask the management of the inefficient company just taken over to implement the desired fundamental changes to its operating policies and practices.

6.5.2 TDC Management Changes Direction

The US operator, SBC, sold its TDC shares on the open market in June and November 2004. This left TDC with a widely diversified group of public stockholders providing little direction or constraint on TDC management. It was free to choose the future direction of TDC, and to implement its vision without the constraint of a dominant shareholder. The build-up of its long-term investment reserve over 2004 and 2005 was consistent with preparation for new major investments to exploit new opportunities consistent with its vision. But it was also consistent with preparing TDC to be irresistibly attractive for a leveraged buyout by a PEG. This would destroy the TDC vision of being a significant player in the European telecom market, but could provide enormous personal rewards for the TDC management.

The evidence suggests that TDC management has been unfailingly responsive to the PEG takeover team from very early in the process. It is highly probable that if the TDC management and Board had not recommended stockholder acceptance of the NTC offer, it would not have gone ahead. The NTC tender offer for TDC shares was made on 2 December 2005, with the immediate support of the TDC management and Board. No special conditions appear to have been placed on the takeover, although continued employment of TDC top management is a possibility. Although completion and change of ownership didn't take place until 1 February 2006, TDC management cancelled the regular December 2005 dividend to stockholders at the request of NTC, which at that time held no shares in TDC. TDC management apparently was taking direction from the possible future owners rather than the actual owners, at least from the time that the TDC Board recommended acceptance of the tender offer. The PEG industry refers to such arrangements as 'sweetheart deals'.

6.5.3 Failures of Governance?

TDC is the major telecom infrastructure provider in Denmark. As a public utility, it uses public resources, has public service obligations and is subject to sector regulation by the ITST agency. It carries a special stewardship responsibility for its distinctive role in the Danish economy and in implementing a range of government policies with regard to information and communication technologies and services, including Denmark's transition to an information society. One would have expected that the considerations of the public interest in Denmark might have been brought to bear in specified terms and conditions of the TDC takeover.

Most PEG takeovers contain terms and conditions protecting a variety of interests, including such things as minimal levels of investment, employee protection and commitments to implementing specific government policies. In the US, Canada and other countries, approval of public utility ownership transfers by industry regulators is required, and in some countries the relevant ministries as well. Recent discussions of this nature have taken place with respect to PEG interest in Bulgaria Telecom and Bell Canada. Evidently such discussion did not take place in Denmark.

Failing this, one would expect management to exercise its stewardship responsibilities and negotiate protective provisions for TDC's public interest responsibilities, if not its vision for the company's future. In addition, one would expect the Board to be sensitive to TDC's public interest requirements, as well as employee protection as there are four employee representatives on the Board.

There seem to have been major breakdowns in the exercise of important stewardship and governance functions associated with the TDC takeover. There are no evident protective provisions to prevent NTCH from doing what it wishes with TDC's capital and human resources.

7. Conclusion

PEG investment in target companies can have either beneficial or detrimental effects, depending on the type and purpose of investment. Unfortunately, the evidence to-date suggests that the TDC leveraged buyout is directed to short-term cash generation for the new owners, advisors and managers, at the expense of long-term development of the company implementing its former vision. The benefits arise from cash payouts, running up TDC debt, selling TDC investments and assets, and minimising operating expenses. Tax avoidance can provide additional benefits, but these have not been examined here.

TDC has been burdened with an unsustainable long-term financial risk that mortgages both its present and future cash flows from operations, and severely impairs its long-term investment capacity. In its present state TDC has no long-term future as a significant player in European markets, and the new owners will have no long-term responsibility for managing the TDC debt mountain they have created that may require crisis management for refinancing in 2014. This suggests that the most profitable option for NTCH in selling off the residual TDC is likely to be returning it to the public share market, following the example of *eircom*.

The most significant long-term implications relate to the fundamental limitations being placed on TDC's capabilities for investing in the continued development of Denmark's communication infrastructure for its future economy and information society. TDC's capacity for implementing its universal service and other public service responsibilities for the future is being impaired, as is its capability for playing a role in implementing the IT and telecom sector objectives of the Lisbon Agenda in completing the European market.

Certainly other telecom firms will expand their operations in Denmark to try to fill the gap left by TDC's decline. But as TDC is the provider of the vast majority of telecom facilities infrastructure in Denmark, upon which virtually all other service providers must rely in order to reach their customers, this is likely to be a lengthy, difficult and costly transition associated with the financial haemorrhaging of TDC, the decline of Denmark's international standing as a leader in the sector, and the removal of an enormous amount of capital from the Danish economy.

However, at least some of the harmful effects can be mitigated. To ensure its established communication sector policy objectives can continue to be implemented effectively, Denmark can strengthen its communication law. It can give the sector-specific regulator, ITST, powers to regulate TDC's financial as well as its operational activities, and information gathering powers that allow it to 'pierce the corporate veil' of the NTCH holding company labyrinth. This would bring Denmark into line with the regulatory provisions in leading countries.

The initial requirement should be to ensure full transparency to the regulator and the public with respect to all transactions that affect the implementation of TDC's public service responsibilities, including financial transactions. For all its major financing activities, TDC could be required to obtain advance approval from the Danish telecom regulator that they are in the public interest.

More specifically, the regulator would need to be empowered to require TDC to put forward for advance approval against the public interest standard in the Danish law:

(1) all payments to NTCH and its affiliated companies and partners, including fees for financial services, non-arm's-length transactions, management fees and bonuses;
(2) a sustainable long-term investment program that will continue network broadband development in Denmark at a pace that will maintain Denmark's position as a member of the leadership group of Nordic countries;
(3) a sustainable long-term financing plan based on generally accepted norms for the telecom sector, and a specific program for managing the transition from the current unsustainable financial structure to an approved sustainable long-term plan;
(4) a sustainable long-term human resources development plan to make full and effective use of staff resources in the transition back from the current short-term TDC agenda to the sustainable long-term growth agenda;
(5) a research and development program appropriate to maintaining TDC's stated long-term vision of being the best provider of communication solutions in Europe.

The strengthened regulatory powers recommended here are not without precedent. Many regulatory agencies in the US and Canada have had similar strong financial regulatory powers over public utilities since the holding company financial manipulations of the 1930s, precisely because they were 'businesses affected with a public interest'. A leveraged buyout of an incumbent telecom operator could not take place in the USA or

Canada today without approval from one or more industry regulatory authorities (Melody 1997).

Although the leveraged buyout of TDC has been successful and the first step in the cashing out process completed, it is not too late to prevent the next steps from further damaging TDC's capabilities for meeting its public interest obligations in Denmark. Nor is it too late to reverse at least some of the damaging changes that have already occurred. The public interest in telecom can be protected by strengthening the communication law and regulatory powers along the lines suggested here. This, in turn may provide a model for public utility infrastructure regulation generally in Denmark and many other countries.

The potential payoff from reducing short-term performance obsession in the investment and corporate communities is substantial (Rappaport 2005).

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[1] Financial Times, 8 May 2007.
[2] Data for this analysis was drawn primarily from *eircom* Annual Reports, 2001-2005, and other information on the *eircom* website (www.eircom.ie), and from reports on the Irish telecom regulator website (www.comreg.ie).
[3] Unless referenced elsewhere, data for the TDC analysis has been drawn from TDC and NTCH financial and other reports available at http://tdc.dk and http://tdc.com, and from information available from ITST, the national telecom regulator http://itst.dk.
[4] NTCH EBITDA data is for 11 months. For this calculation it has been annualised.
[5] They also include some network services in Sweden, Norway, Finland and Hungary.
[6] Company announcement 30 October 2006.