3G in Europe: Future Markets (Preparing for Launch)

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6.3 Denmark

6.3.1 Regulatory Environment

In April 2000 the Danish regulator, the National Telecom Agency (NTA, also known as Telestyrelsen) issued tender documents for two GSM-900 and two GSM-1800 concessions. By the closing date in October applications had been received from TDC (Tele Danmark), Sonofon, Orange Denmark and Telia. As the only interested parties TDC Mobile and Sonofon were automatically awarded licences in the 1800MHz frequency while, at the end of January 2001, the two national GSM-900 licences went to Orange Denmark and Telia.

In June 2001 the NTA unveiled plans for an auction of third-generation UMTS concessions. The sale took place on 5 September, with a single round of sealed bidding. The minimum price was set at DKK500 million, with all winners paying an amount equal to the lowest submission: operators are required to pay 25% of the bid price up-front; the remainder is payable over a ten-year period. On 20 September it was announced that existing 2G operators TDC Mobile, Orange Denmark and Telia Denmark plus newcomer Hi3G, an alliance of Hutchison Whampoa (60%) and Investor AB (40%), had been successful in their applications. Each of the licensees must pay DKK950 million (USD118 million) for their concession. All operators will be obliged to achieve a minimum coverage of 80% of the population by 2008 at which point limited network sharing is envisaged.

6.3.2 Market Developments

By the end of June 2001 Denmark had approximately 3.796 million mobile users, a 24% increase on the number in June 2000. The rise pushed cellular penetration up to 71.8%, comparable with the rest of the Nordic region. The introduction of pre-paid packages in 1998 has had a marked effect on take-up and by the end of 2000 pre-paid options accounted for around 31% of all mobile users, up from 28% twelve months earlier.

As in other European markets, the use of SMS messaging in Denmark has vastly expanded. According to figures published by Telestyrelsen, 465 million SMS messages were sent in 2000, more than double the previous year's total. In response to the increasing demand for SMS and data services, all of the country's cellular operators have invested in the provision of mobile internet services and the rollout of GPRS. In December 2000 Sonofon launched GPRS and was followed a month later by TDC Mobile.

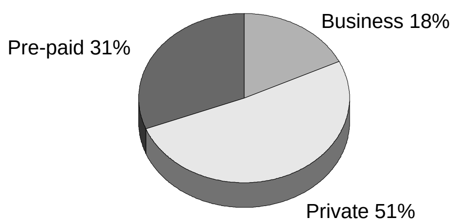
Figure 6.9

Denmark - The Current Market for Cellular Services

Player	Ownership
TDC Mobile	TDC 100%
Sonofon	Telenor 53.5%, BellSouth 46.5%
Orange Denmark	Orange 53.6%, institutional shareholders 32.4%, Danish National Railway Authority 14.0%
Telia Denmark	Telia 100%

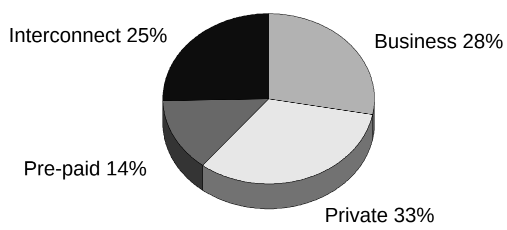
Operator	Service	Launch	Subscribers December 1999	Subscribers December 2000	Revenue (USDm) 1999	Revenue (USDm) 2000
TDC Mobile	GSM-1800/NMT	Jan-82	1,311,000	1,648,000	476.8	529.0
Sonofon	GSM-1800	Mar-92	846,000	966,000	416.3	357.0
Orange Denmark	GSM-1800	Mar-98	320,000	517,000	116.4	203.0
Telia Denmark	GSM-1800	Jan-98	170,000	297,000	61.2	90.0
Total Cellular			**2,647,000**	**3,428,000**	**1,070.7**	**1,179.0**

Subscribers Split by Package - 2000



Total Subscribers - 3,428,000

Revenues Split by Package - 2000



Total Revenues - USD 1,180 million

6.3.3 The Future Market

At the end of 2000 Denmark lagged behind its Nordic neighbours with a cellular penetration rate of only 65%. However in the first half of 2001 rapid subscriber growth brought it into parity with the other Scandinavian markets. By 2010, CIT estimates subscribers will have grown by 32.7% to reach 4.5 million. 2G subscriber figures will begin to fall in 2003, with 41.1% of all users signed up to third-generation services by 2010.

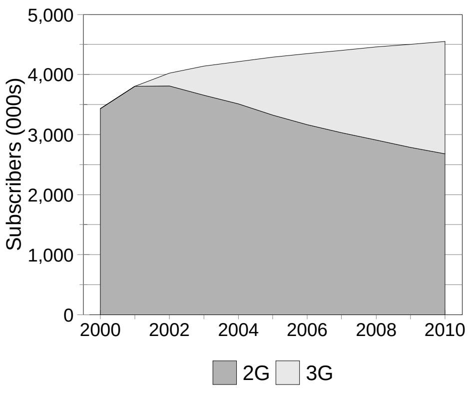
With the addition of over one million subscribers expected in the period 2000 to 2010 Denmark should see voice revenues increasing in spite of falling voice ARPUs. CIT predicts voice revenue growth of 20% over the period. Coupled with a five-fold rise in data revenues, Denmark will see a 67% increase in total revenues between 2000 and 2010, significantly better than the growth rates expected in other Nordic countries. By 2010 Denmark should see 3G revenues exceeding those of 2G services.

Figure 6.10

Denmark - Ten-year Projections for Cellular Subscribers

Subscribers (000s)		1999	2000	2001	2002	2004	2006	2008	2010
Total cellular subscribers of which:		**2,647**	**3,428**	**3,805**	**4,026**	**4,213**	**4,345**	**4,458**	**4,548**
2G + 2.5G Subscribers		**2,647**	**3,428**	**3,805**	**3,810**	**3,506**	**3,164**	**2,908**	**2,677**
	Business	595	612	622	569	425	324	272	245
	Consumer	1,310	1,755	1,928	1,979	1,911	1,798	1,731	1,692
	Pre-paid	741	1,061	1,256	1,262	1,170	1,042	904	741
3G Subscribers		**-**	**-**	**-**	**215**	**707**	**1,181**	**1,551**	**1,871**
	Business	-	-	-	63	229	351	426	476
	Consumer	-	-	-	126	405	720	999	1,271
	Pre-paid	-	-	-	26	72	110	126	124
Total Cellular Penetration		50%	65%	72%	76%	79%	81%	83%	84%

2G and 3G Subscribers, 2000-2010



Total Subscribers by Package, 2000-2010

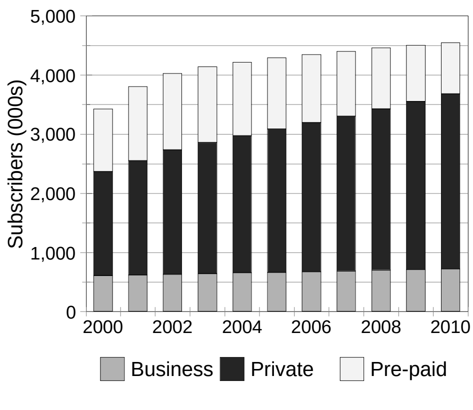
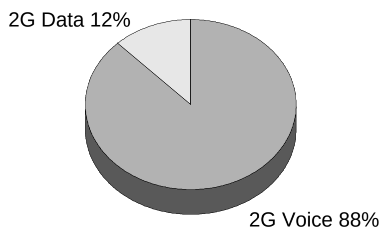


Figure 6.11

Denmark - Ten-year Projections for Cellular Revenues

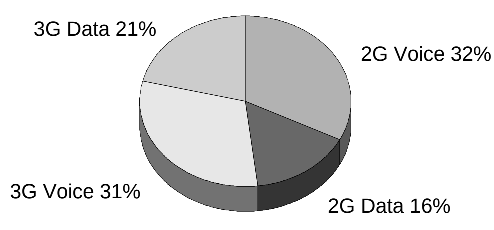
Revenue (USDm)		1999	2000	2001	2002	2004	2006	2008	2010
Total cellular revenues of which:		**1,052**	**1,180**	**1,336**	**1,441**	**1,665**	**1,796**	**1,894**	**1,969**
2G + 2.5G Voice		**998**	**1,036**	**1,104**	**1,081**	**930**	**795**	**706**	**638**
	Business	319	295	281	257	184	130	102	87
	Consumer	292	339	380	384	359	333	313	302
	Pre-paid	100	140	163	166	147	127	110	91
Interconnect Revenues		286	261	280	274	240	205	180	159
2G + 2.5G Data		**53**	**144**	**232**	**318**	**323**	**314**	**311**	**309**
	Business	13	34	59	100	96	86	78	72
	Consumer	17	47	77	105	116	125	134	144
	Pre-paid	7	25	37	38	35	32	28	24
Interconnect Revenues		16	38	59	75	75	72	71	69
3G Voice		**-**	**-**	**-**	**27**	**262**	**425**	**531**	**605**
	Business	-	-	-	10	105	163	188	197
	Consumer	-	-	-	9	90	156	213	262
	Pre-paid	-	-	-	1	11	16	18	18
Interconnect Revenues		-	-	-	6	56	90	113	128
3G Data		**-**	**-**	**-**	**15**	**151**	**262**	**346**	**417**
	Business	-	-	-	5	71	133	174	193
	Consumer	-	-	-	7	52	84	114	154
	Pre-paid	-	-	-	0	3	4	5	5
Interconnect Revenues		-	-	-	3	25	41	54	66

Revenues Split by Traffic - 2000



Total Revenues - USD 1,180 million

Revenues Split by Traffic - 2010

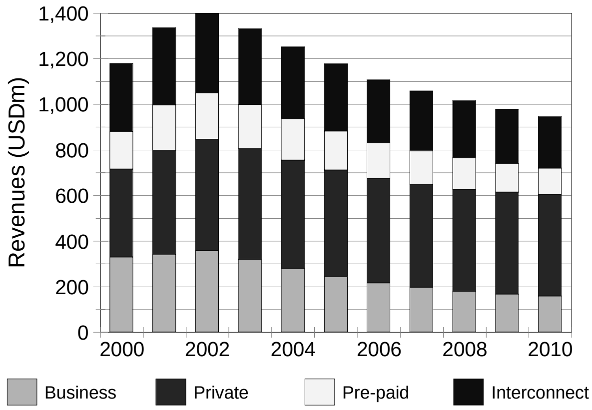


Total Revenues - USD 1,969 million

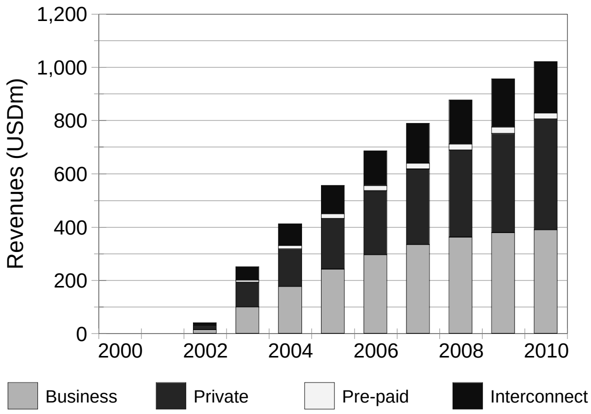
Figure 6.12

Denmark - Ten-year Projected Revenue Splits

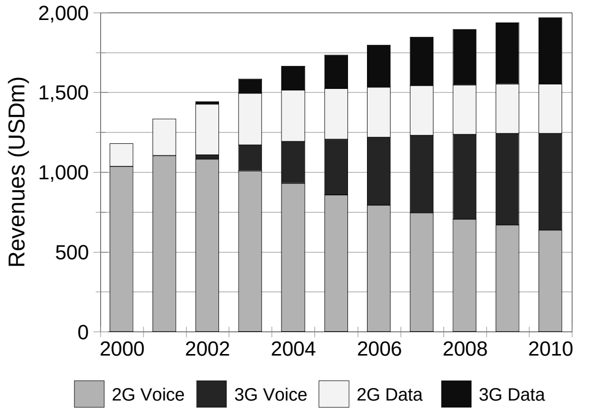
Total 2G+2.5G Revenues by Package, 2000-2010



Total 3G Revenues by Package, 2000-2010



Total Cellular Revenues by Service, 2000-2010



5.9 Telenor

5.9.1 Group overview

Telenor is the biggest mobile operator in Norway, with a subscriber market share of 73%. Outside its domestic market it holds a selection of mobile assets in countries as far-flung as Bangladesh, Hungary, Malaysia, Montenegro, Russia, and Ukraine. The company divides its European investments between two regions, one encompassing the new markets of central and eastern Europe, the other comprising the more mature markets of western Europe. Wholly owned Telenor International holds shares in Sonofon in Denmark, Connect Austria and Portuguese subsidiary Oni Way while Telenor B-Invest, in which Telenor owns 73.33%, has 18% of Greece's Cosmote.

During early 2001 Telenor disposed of several western European mobile assets in order to concentrate its efforts on more developing markets, particularly in eastern Europe. In January the company opted to sell its 10% stake in German mobile operator Viag Interkom to BT and the following month also sold its 49.5% stake in Irish mobile operator Digifone to the same company. Together the disposals gave Telenor a pre-tax profit of around NOK10 billion.

Figure 5.41

Telenor's Mobile Holdings in Europe

Operator	Country	Licence Type	Stake
Connect Austria (One)	Austria	GSM/UMTS	17.5%
Sonofon	Denmark	GSM	53.5%
Cosmote	Greece	GSM/UMTS	13.2%
Telenor Mobil	Norway	GSM/UMTS	100.0%
Oni Way	Portugal	UMTS	20.0%

5.9.2 Third generation strategy

Besides its wholly owned domestic subsidiary Telenor Mobil, Telenor has secured minority stakes in three third-generation licence holders in Europe. Strategically Telenor seems to be concentrating on less developed markets in eastern Europe. Its first western European licence came in August 2000 when Oni Way secured a concession in Portugal. Three months later Telenor won a licence in Austria and in December it gained a third concession, in its domestic market. In July 2001 Cosmote in Greece also won a 3G licence. In addition Telenor, through its subsidiary Sonofon, bid unsuccessfully for one of the four 3G licences in Denmark where it pursued the licence alone following the withdrawal of BellSouth from the consortium. This could herald a change in the ownership of Sonofon itself, in which BellSouth holds the 46.5% not held by Telenor.