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DEVELOPMENT OF DANISH VALUATION SYSTEMS

The slides with this title give an overview of the development and present situation in Denmark.

The rest of this paper describes details about property taxes and valuation in Denmark in the year 2000.

The main changes from 2000 to 2005 are:

- Central government has in 2002 taken full responsibility for valuation. Before municipalities gave secretarial assistance to lay political elected members of valuation committees
- Annual revaluations (1998-2002) has been replaced with revaluations every second year. Dwellings one year – business and agriculture the next year.
- General tax freeze from 2002. Freeze of tax amount for property value tax on owner-occupied dwellings. Ceiling for land tax – except for municipal decisions to increase the land tax rate.

This paper has an English, a Spanish and Russian language version.

PROPERTY TAXES AND VALUATION IN DENMARK

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1. Overview

Denmark has three types of recurrent property taxes, a land tax on all types of land, a service tax on the value of buildings used for business or administration, and a property value tax on the owner-occupiers of dwellings and summer houses. All three taxes are local taxes levied by the two levels of local government (municipalities and counties).

Table 1. Overview of the recurrent property taxes in Denmark

	<i>Land tax</i>	<i>Service tax</i>	<i>Property value tax</i>
Official name in Danish	Grundskyld	Daekningsafgift ^{a)}	Ejendomsvaerdiskat
Year of introduction	1926	1961	2000 ^{b)}
Coverage	All land	Buildings used for commerce, administration and manufacturing	Owner-occupied dwellings and summerhouses
Basis of tax	Land values (Capital value)	Building values (Capital value)	Property values (Capital values)
Taxpayer	Owner	Owner	Owner
Beneficiary government	Municipalities Counties	Municipalities Counties	Municipalities Counties

a) In Danish the name "daekningsafgift" is also used for the land tax paid for government properties.

b) The property value tax replaces - and is very similar to - the income tax of imputed rent of owner-occupied dwellings and summerhouses.

2. History

The tax reform of 1903 introduced income taxes and created the foundations for the Danish systems of taxes. The reform replaced a number of old property taxes with one property tax based on the market value of immovable property and revaluation of all properties every 4 years was introduced. In 1926 a land tax was introduced based on the market value of the land alone and the property tax became a tax on the value of the buildings. Land was taxed at higher rates than the buildings. In 1958 the amounts for the building tax was fixed and collection of the building tax ended in 1986.

In 1961 the service tax was introduced. The rationale is to reimburse the local government for costs incurred by the buildings used by businesses and government. This became important since the building tax was phased out and since only residents pay the local income tax.

An annual land gain tax based on the increases in land values existed in the period 1933-66.

The property value tax based on the property values of owner-occupied dwellings and summerhouses was introduced in 2000. This tax replaces – and is very similar – to the income tax of imputed rent of owner-occupied dwellings and summerhouses, which has existed for almost a century¹. The imputed rent was calculated as a percentage of the assessed market value of the property and that amount was then taxed as income. Several reforms during the last 20 years have changed the taxation of the imputed rent so that it has become less dependant upon the other income received by the taxpayer. In the year 2000 the tax was changed again and became a true property tax where the tax is calculated as a percentage of the assessed market value of the property

¹ Income tax of imputed rent of owner-occupied dwellings exists today in the following OECD-countries: Norway, Netherlands, Belgium, Luxembourg, Switzerland, Italy, Spain, Greece, and New Zealand.

and is independent of the income of the taxpayer². For the owner-occupiers of dwellings and summerhouses the new property value tax for 2000 is almost identical to the income tax of imputed rent they would have paid if the law had not been changed. The income tax of imputed rent was revenue for central government, counties and municipalities as the personal income tax is a tax to all three levels of government. In contrast, the central government will not receive anything from the new property value tax, the counties will receive 1/3 and the municipalities 2/3 of the revenue.

3. Tax Rates

Land Tax

The land tax rate to the counties has since 1979 been decided by the Parliament. The rate is 1 percent of the market value of the land. The municipal council decides the land tax rate to the municipality every year. Since 1987 the legislation prescribes that the rate must be between 0.6 percent and 2.4 percent of the land values. Some councils decide the minimum, others the maximum, and most of them a rate in between. In 1999 the average municipal land tax rate was 1.3 percent. Out of the 275 municipalities 43 adopted the minimum rate of 0.6 percent and 11 adopted the maximum rate of 2.4 percent.

Each property is located in a municipality and in a county as well³. Each taxpayer will thus pay land tax to both the county and to the municipality and the two taxes are collected together by the municipalities. The average combined land tax rate is 2.3 percent of the land value.

Table 2. Land Tax Rates. 1999

	To Counties	To Municipalities	Combined
Maximum	1.0%	2.4%	3.4%
Minimum	1.0%	0.6%	1.6%
Average	1.0%	1.3%	2.3%

Service Tax

For buildings for private businesses there is no service tax to counties. The service tax to municipalities cannot be more than 1 percent of the value of the building. 29 percent of the municipalities (mostly urban areas) have decided to levy this tax. Some are using the maximum rate and on average the rate is 0.7 percent for those municipalities that levy this service tax.

² For a more detailed description of the new property value tax see Flemming Paludan, *New Development Trends and Options for Property Taxation and Valuation in Denmark*, in *Journal of Property Tax Assessment and Administration*, Volume 4, number 2, 1999. This article also describes the increasing difficulties in gaining the taxpayer's acceptance of the estimation of land value used for the land tax and the considerations about replacing the land tax with a property tax.

³ The municipalities of Copenhagen and Frederiksberg also have the responsibilities of counties and levy land taxes similar to a combined municipal and county land tax.

For buildings owned by the central government the service tax to the counties is 0.375 percent of the value of the building. There is no county service tax for municipal buildings.

For buildings owned by the central government or by the counties there might be a service tax to the municipalities at a maximum rate of 0.5 percent of the value of the building. 74 percent of the municipalities levy this tax, almost all of them at the maximum rate.

Table 3. Service Tax Rates. 1999

		To Counties	To Municipalities	Combined
Business	Maximum	-	1.0%	1.0%
	Percentage using tax	-	29%	-
	Average for those using tax	-	0.7%	0.7%
Government	Maximum	0.375%	0.5%	0.875%
	Percentage using tax	100%	74%	-
	Average for those using tax	0.375%	0.488	0.863%

Property Value Tax

All owner-occupiers of dwellings⁴ and summerhouses pay the property value tax. The basic tax rate is 1 percent of the market value of the property up to a threshold of 2.6 million DKK. For any value above this threshold the basic tax rate is 3 percent. The value of the threshold is changed every year according to the trend in market values.

Taxpayers aged 67 years or more get a reduction of their property value tax. There is a cap on the reduction and the reduction also depends on the taxable income of the taxpayer. The rate for a taxpayer aged 67 years or more, who has a maximum reduction, is 0.6 percent of the value up to the threshold and 2.6 percent for any value above the threshold.

For all taxpayers that acquired their property before 1 July 1998 the rates are 0.2 percent points lower. Most of these taxpayers will pay the same property value tax as they would have paid in income tax of imputed rent if that tax had not been replaced by the property value tax.

There is a cap on how much the property value can increase as a result of the annual revaluation. The highest annual increase in the tax is 2400 DKK, but if that amount is less than a 20 percent increase in the tax, then the increase can be as high as 20 percent.

⁴ One family houses, freehold flats (condominium), two or three family houses, and the dwellings on farms or business properties.

Table 4. Tax Rates for the Property Value Tax. 2000.

Basic rates shown in <i>italics</i>			Properties Acquired before 1/7 1998 ^{a)}
	Value up to 2.6 million DKK	<i>1.0%</i>	0.8%
	Value above 2.6 million DKK	<i>3.0%</i>	2.8%
Minimum rates ^{b)} for taxpayers aged 67 years or more	Value up to 2.6 million DKK	0.6%	0.4%
	Value above 2.6 million DKK	2.6%	2.4%

- a) There is a further reduction of the property value tax, capped at 1200 DKK, for properties where the calculation of the imputed rent up to 1999 included a fixed deduction for maintenance.
- b) The reduction of the property value tax for old age taxpayers is capped at 6000 DKK for dwellings and 2000 DKK for summerhouses. The reduction is also depending on the taxpayers taxable income. The table shows the rates for taxpayers that get the maximum reduction.

4. Exemptions and Concessions

Exemptions

Table 5 shows the types of properties that are exempt from paying the land tax and the service tax. There are three ways a property can be exempted. One is that the property is not included in the

Table 5. Exemptions from Payment of Land Tax and Service Tax

Properties are not valued	Must be exempted	May be exempted
Churches and cemeteries	Royal castles	Schools etc.
Squares, streets and parks	Embassies and consulates	Hospitals
Defence installations etc.	Preserved buildings	Libraries
Lighthouses and radio beacons	Community centres etc.	Museums
Railroads, harbours and airports		Social institutions
		Sports facilities
Buildings on rented land having a market value of less than 100,000 DKK		Charities (charitable activities)
		Electricity, water, district heating

valuation list. Other properties are valued, but the municipal council is obliged to exempt the property. A third category is properties that may be exempted by the municipal council.

The exemptions are only pertaining to the part of the property used for the activity in question. For properties with a mixed use it is thus needed to assess a distribution of the value between the exempted use and the non-exempted use.

Reduced Land Tax for Agriculture and Forestry

Since 1994 there has been a cap on the rate of municipal land tax paid by agriculture. The maximum rate was 1.5 percent. Since 1999 the maximum rate was reduced to 0.8 percent and this applies for both agriculture and forestry.

In addition the rate of land tax to the counties is only 0.57 percent for agriculture compared to 1.0 percent for other types of properties. This rule has applied since 1996.

Reduced Land Tax for Government Properties

For the land tax to the municipalities the rules are the following: Properties owned by the central government pay full land tax. Properties owned by the counties pay half of the rate paid by private properties, but at most 1 percent.

For the land tax to the counties the rules are the following: For properties owned by the central government the rate of land tax is 0.5 percent, which is half of what privately owned properties pay. Properties owned by the counties do not pay land tax to the municipalities.

For historical reasons the land tax paid by government properties is called “daekningsafgift” in Danish, the same name that is used for the tax on certain buildings. In this paper I call the tax on certain buildings for *service tax*, and I call the tax on land for both private and government properties for *land tax*.

Deferred Land Tax for Taxpayers Aged 65 Years or More

Taxpayers aged 65 years or more may defer the payment of the land tax related to and owner-occupied dwelling or summerhouse (only for one property). The unpaid taxes including interest is recorded as a loan to the municipality that has to be paid when the taxpayer sells the property or dies. The loan has first priority in relation to other loans and it has to be registered in the Land Registry as a mortgage deed.

5. Revenue

Table 6 shows the revenue from the land tax and the service tax. The revenue from the land tax is about five times higher than the revenue from the service tax. The revenue figures are compared to the total taxes to all levels of government and to the gross domestic product. For 1998 the revenue from these two recurrent property taxes were equal to 2.01 percent of the total taxes and 0.96 percent of the gross domestic product.

Table 6 also shows the estimated revenue from the income tax of imputed rent on owner occupied dwellings and summerhouses. This is a part of the individual income tax and not a recurrent property tax (4100 in the OECD classification). The OECD publication on revenue statistics will thus show that the revenue from the recurrent property taxes in Denmark was 2.01 percent of total taxes in 1998.

However, the new property value tax, introduced in January 2000, should be classified as a recurrent property tax. The expected revenue from the new tax is 8,200 million DKK in 2000 and 9,000 million in 2001. The revenue from the new tax is about 15 percent higher than income tax of imputed rent. Owner-occupiers having bought their property after 1/7 1998 will pay more and this is also the case for taxpayers aged 67 years or more that have a high income. As the time passes a smaller proportion of these taxpayers will have acquired their property before 1998. Consequently, the revenue from this tax is expected to increase significantly over the years. The revenue from the property value tax in the year 2000 is expected to be 9,000 million DKK equal to 1.30 percent of the total taxes. The total revenue from recurrent property taxes in 2000 could thus be expected to be 3.30 percent of total taxes.

Table 6. Revenue from Recurrent Property Taxes. Million DKK.

	1994	1995	1996	1997	1998	1999 ^{a)}
Property taxes:						
Land tax	8 612	8 526	8 536	9 372	9 707	-
Service tax	2 003	1 798	1 777	1 898	1 883	-
Total	10 615	10 324	10 313	11 270	11 590	12 770
Total tax revenue to:						
Central government ^{b)}	332 069	342 384	364 483	380 277	391 310	-
Counties	42 055	44 656	48 428	51 410	56 198	-
Municipalities	107 397	111 587	116 267	121 207	128 066	-
Total tax revenue ^{b)}	481 521	498 627	529 178	552 894	575 574	615 300
Property tax revenue as percentage of total tax revenue to central and local government	2.20%	2.07%	1.95%	2.04%	2.01%	2.08%
Gross Domestic Product (GDP)	965 700	1 008 800	1 065 000	1 117 800	1 213 300	1 271 500
Property tax revenue as percentage of GDP	1.10%	1.02%	0.97%	1.01%	0.96%	1.00%
Income tax revenue of imputed rent [*]	5 400	5 700	6 000	6 200	6 600	6 900
Imputed rent tax as percentage of total tax revenue to central and local government	1.12%	1.14%	1.13%	1.12%	1.15%	1.12%

Sources: Danmarks Statistik, *Skatter og Afgifter 1999*.

^{*}) Estimated by the Ministry of Taxation.

a) According to budget.

b) Including social security contributions etc.

6. Examples of Payment of Property Taxes

There are considerable differences between what different types of properties pay in total property tax. This is illustrated in table 7. The table shows the tax payment of some typical properties. The occupier of the rented flat is not paying land tax directly, but the payment is part of the rent payment. The rules about rent control specify that any increases in payment of property taxes may be added to the rent.

The table shows the higher property tax payment made by owner-occupiers of dwellings and summerhouses. This higher taxation is related to the deductibility for the personal income tax of mortgage interest payments. Until 1985 this was a full deduction in the taxable income. Since then the value of the deduction has been reduced in several steps. In 2002 the value of the interest deduction will be about half of the value of a full deduction.

For owner-occupied businesses the property taxes are deductible business expenses. This will be the case for urban businesses owning and using commercial or industrial businesses properties. The land tax will also be a deductible business expense for farmers, but the property value tax paid on the value of the farmhouse will not be deductible.

Table 7 shows the lower land tax rate for agriculture. The effective rate is still lower since the assessed land values for agricultural land is less than half of the actual market values.⁵

Table 7. Tax payment for different types of properties. 2000.

	One-family house	Summer-house	Freehold flat	Rented flat	Private offices	State offices	Farm
Owner-occupied	yes	yes	yes	no	yes/no	yes	yes
Assessment:							
Land value	200 000	130 000	80 000	80 000	1 000 000	1 000 000	400 000
Property value	800 000	400 000	480 000	-	4 000 000	4 000 000	1 900 000
Farm house value	-	-	-	-	-	-	500 000
Combined tax rate in average municipality							
Land tax	2.3	2.3	2.3	2.3	2.3	1.8	1.37
Service tax	-	-	-	-	0.7	0.863	-
Property value tax	1.0	1.0	1.0	-	-	-	1.0
Tax payment							
Land tax	4 600	2 990	1 840	1 840	23 000	18 000	5 480
Service tax	-	-	-	-	21 000	25 890	-
Property value tax	8 000	8 000	4 800	-	-	-	5 000
Total	12 600	10 990	6 640	1840	44 000	43 890	10 480

7. Local Taxation

Table shows how important the property tax revenue is for the counties and for the municipalities. For both level of government the total property tax revenue is between 6 and 7 percent of the total tax revenue of that level of government. The local personal income tax is about 14 times more important for both levels than the property taxes are.

The county councils and the municipal councils decide annually a tax rate for the county income tax and the municipal income tax. There are no limits for these rates, but central government has for many years put considerable pressure on local government that the average rate of local income tax remains more or less constant. The local income tax is “piggy backed” onto the central income tax. Central government collects the combined personal income tax and the municipalities do the auditing and assessment.

Corporate income tax is levied at a national tax rate. Central government does collection and assessment and the municipalities receive 20 percent of the revenue related to their area.

The grants from central government to local government are calculated in such a way that the “taxing capacity” of a municipality will influence the size of the grant, but the actual tax revenue

⁵ See “Valuation of Different Types of Properties” in section 10.

will not influence the grant. The taxing capacity is calculated from the taxable income and taxable land values and building values in the municipality.

Table 8. Local Taxes 1997. Million DKK.

	Central	County	Municipality	Total
Property taxes:				
Land tax	0	3 388	5 984	9 372
Service tax	0	96	1 802	1 898
Total	0	3 484	7 786	11 270
Personal income tax etc.	131 635	47 926	110 022	289 583
Corporate income tax etc.	25 450	0	3 248	28 698
Total local taxes	-	51 410	121 207	172 617
As percentage of total taxes to this level of local government:				
Property taxes	-	6.8%	6.4%	-
Personal income tax	-	93.2%	90.9%	-
Corporate income tax	-	0	2.7%	-

Sources: Danmarks Statistik, *Skatter og Afgifter 1999*.

8. Other Taxes Related to Properties

A number of taxes are related to immovable property, but they are not paid annually.

Inheritance and gift taxes are levied on the value of what the inheritor or donee receives. The donee will declare the value. For immovable properties the tax authorities will, as a rule, accept declarations within the limits the assessed property value plus and minus 15 percent.

Stamp duties are levied on various types of contracts. For deeds transferring immovable property the tax is 0.6 percent of the sales price for dwellings and 1.2 percent for business properties. The assessed property value is the base of the calculation of the tax if that amount is higher than the declared sales price.

When land is transferred to the urban zone, the owner must pay development gain tax (frigørelsesafgift). The base of the tax is the difference between the land value after rezoning and the land value for agricultural use. The tax is 40% of the first 200.000 DKK and 60% of the rest. The municipality is obliged to buy the land for the assessed value after rezoning.

Capital gains on immovable properties are taxed under the income tax with a tax rate of 42 or 57 percent. Owner-occupied dwellings and summerhouses are exempt. The tax is reduced according to how long the taxpayer has been the owner. If he has been the owner for 9 years or more the tax is reduced by 30 percent. The basis for the tax is the assessed property value from 1993 or a later acquisition price.

Table 9 shows the revenue for these taxes. Only a part of the revenue is related to immovable properties for the inheritance and gift duty and for the stamp duty. The revenue from capital gain tax on properties is not available since it is part of the revenue on income tax.

Table 9. Other Taxes Related to Properties 1997

	Revenue Million DKK	Percentage of total taxes
Inheritance and gift tax	2 153	0.38%
Stamp duty	4 423	0.80%
Development gain tax (frigoerelsesafgift)	59	0.01%
Capital gain tax on properties (avancebeskatning)	-	-

9. Distribution of Administrative Responsibilities

The municipalities carry out collection of land tax and service tax. They collect both the municipal taxes and the county taxes.

Central government collects the new property value tax. It is withheld together with the individual income tax. The collection is thus carried out in the same way as for the income tax of imputed rent.

The central government has the main responsibility for valuation of immovable property. Central government appoints 224 Valuation Committees, each having 3 members. Each Valuation Committee is given secretarial assistance by the municipality.

The Central Customs and Tax Administration, which is a part of the Ministry of Taxation, carries out the central co-ordination of valuation and gives instructions to the Valuation Boards.

Each municipality has a Property Tax Office, which carries out the collection and the secretarial assistance to the Valuation Board.

The basic information needed for valuation and collection is all stored in computerised registers. The Central Customs and Tax Administration maintains a Register of Sales Prices. The municipalities maintain a Valuation and Collection Register. This register includes description of the land parcels, which come from the National Survey and Cadastre. The municipalities maintain a Building and Dwelling Register containing the description of the buildings and dwelling units.

The Ministry of the Interior legislates about the land tax and the service tax while the Ministry of Taxation is responsible for legislation about the property value tax and the legislation about valuation.

10. Collection and Enforcement

Land Tax and Service Tax

The municipalities collect the land tax and the service tax. At the beginning of the year the computer system will print out the annual property tax bill. Each municipality decides the number of instalments, usually 2 or 4. The property tax bill will also include various municipal charges levied on the property. This can be contribution to roads, sewerage, district heating, streetlights or water.

Payment can be by cash at the municipal office, by the postal giro system or through the banks automatic payment system (PBS).

The municipality will not issue a new property tax bill if a property is sold during the year. Instead the new and the old owner will include property taxes due in the economic settlement between them. This is also the case if a property is divided during the year.

In case of non-payment of property taxes there will be an interest charge of 1 percent per month.

Unpaid land tax and service tax is a charge on the properties, which takes priority over any other debt or charge. In case of continued non-payment the government can have the Magistrate schedule a public auction where the property will be sold to the highest bidder. The proceeds from the auction will be used to cover the property tax arrears, accumulated interest and the legal fees. Any surplus will be given to the former owner. The municipality has to demand an auction within 2 years and 3 months from the time of non-payment to maintain the first priority in relation to other debt and to maintain the right of having an auction.

The economic costs of having your property sold at an auction due to non-payment of property taxes are very high. This is due to the high legal fees, but also because you will get a much lower price at an auction than if you were selling the property in a normal way. Due to this fact the number of auctions due to non-payment of property taxes is very low. The owner will do his utmost to pay the property taxes before any legal actions are taken. If he is experiencing serious economic troubles he will arrange to sell the property on the normal market rather than having it be sold at an auction.

As a result of these very efficient enforcement mechanisms the collection rate for land tax and service tax is very high. Probably as much as 99 percent of the tax demands are paid before the deadlines, and almost all of the arrears are paid after legal actions have been taken.

Property Value Tax

The collection and enforcement of the new property value tax is similar to the tax it replaces, the income tax of imputed rent of owner-occupied dwellings and summer houses.

The property value tax is included in the withholding of the individual income tax. Enforcement will be carried out together with the enforcement of the income tax. The same instruments as for the income tax will be available, such as attachment to wages, goods or immovable property. However, unpaid property value tax is not a charge on the property, which takes priority over other debt or charges, as it is the case with the land tax and the service tax.

11. Valuation

Valuation Cycle

Since 1903 there has been a revaluation of all properties every 4 years. Properties where land or buildings have changed were valued at the beginning of every year between two valuations. The owner could at any time for a fee request a new valuation. All values assessed between two revaluations were estimated according to the price level of the last revaluation.

In 1981 computerised annual updates were introduced. The updating factors were based on the property price trends for different types of properties in each geographical area. The updates were carried out during each of the three years between two revaluations, and the resulting values could not be appealed.

Since 1998 there have been annual revaluations of all properties.

Values and Use Codes

For each property a revaluation results in the estimation of the following:

- Land value
- Property value
- Property use code

The land value is the market value of the land alone. This value is the basis of the land tax. The property value is the market value of both land and buildings. This value is basis for the property value tax and is used for the assessment of some other taxes related to immovable property (see section 11 below). The basis for the service tax is the difference between the property value and the land value. For most properties, but not all, this difference is equal to the value of the building.

For some properties it is also necessary to estimate a division of the land value and property value. For farms and other business properties, which contain an owner-occupied dwelling, the property value of the dwelling needs to be estimated. The property value of an owner-occupied dwelling needs to be assessed for two and three family houses. If a part of a property is subject to service tax then a distribution of the values needs to be made. For properties, which are part exempt, there needs to be an estimate of the value of the non-exempt part of the land and buildings.

Determination of the property use code is an important part of the valuation process. The property use code should reflect that use of the property, which is the basis for estimating the market value of the property. This means that the property use code and the present use of the property in some cases can be different. The use code is independent of the formal registration of agricultural land in the Cadastre. The use code is also independent of the building use code recorded in the Building- and Dwelling Register. The building use code describes the actual use of each building.

The property use code determines how the property is valued. This is especially important for those types of properties where computerised valuation methods are applied. The property use codes are also applied in the statistics about sales prices. 40 different property use codes are in use.

Valuation Principles

The total value must be the full market value of the property including land and buildings but excluding machinery, furniture and livestock. The value is the average cash payment a sensible buyer would pay for the property at the time of valuation.

The best economic use is the basis of the valuation. All public regulations like planning regulations, preservation of buildings or nature and rent control must be taken into consideration. Private regulations and agreements are not taken into consideration. This means that unusual rent agreements or special mortgage conditions do not influence the value.

The land value must be the full market value (assuming cash payment) of the land without the buildings.

Also for the land value the best economic use of the land disregarding the existing buildings and the present land use is the basis of the valuation. All public regulation concerning the land but not the buildings is taken into consideration. The land value includes site improvements like drainage, sewerage and roads.

Each separate property is valued. A separate property consists of one or more cadastral plots. The condition for valuing several plots as one property is that they are used as one economic unit. All freehold flats (owner-occupied or rented out) are valued as separate properties even though they are not a separate cadastral unit.

The valuation should include the building, but not machinery, loose equipment etc. A set of rules has been developed to determine what is part of the building and what is loose equipment.

January 1 is the valuation date. This means that each property should be valued in the condition of the property on that date and according to the price level around that date.

The sales approach is the preferred method and is used for those types of properties where there are enough open market sales. The income approach is used for rented properties where sales are infrequent, and the cost approach is used for any remaining types of properties.

Valuation Committees

224 valuation committees make the decisions about the values for each property. Each committee has a chairman and two other members. The Minister of Taxation appoints the members. They are instructed and paid by the Central Customs and Tax administration. There are no professional requirements for being appointed as a member of a valuation committee and it is a part time job. The members are offered one-week training courses about valuation and they are required to attend instruction meetings.

Each valuation committee is responsible for valuation in a certain area called a valuation circle. Some valuation circles include one, two or three municipalities. Other valuation circles include only a part of a municipality.

The municipalities give secretarial assistance to the valuation committees. The municipal staff will prepare and complete the valuation activities. They can make recommendations about the values, but the final decision about the values rests with the valuation committee.

Supervision, Appeals and Revisions

27 supervisory boards carry out supervision of the valuation procedures and results. The supervisory boards consist of the chairmen of the valuation committees. The regional offices of the Central Customs and Tax Administration give the supervisory boards secretarial assistance.

When the taxpayer is informed about the assessed values, he is informed that he can make an appeal if he thinks that the assessed values are not a fair estimate of the market values. The valuation results for all properties are shown at lists on display at the municipal office. Starting in 2000 all property assessments are displayed on the internet.

An appeal should be in writing and giving reasons for the opinion of the taxpayer. It is sent to the valuation committee. If they agree with the taxpayer they change the values. This will typically be the case if some of the basic information, like the size of the building, is proved to be wrong or if they have not been aware of circumstances that do influence the value. If they disagree with the taxpayer they forward the appeal to the supervisory board. The taxpayer is informed about this and he can request a meeting with the board or that the board makes an inspection of the property. The board (minus the member involved in the original valuation) decides on the values and informs the taxpayer.

If the taxpayer does not agree with the decision of the supervisory board he can appeal to the National Tax Tribunal. To make this appeal he need to pay a fee of 600 DKK, which is returned if the tribunal end up agreeing in part or in full with the taxpayer.

At the revaluation in 1988 and 1992 the number of appeals was as high as 100,000 or more than 5 percent of the total number of properties. After the introduction of annual revaluation in 1998 the

number of appeals to the valuation committees has been around 30,000 (1.5 %)⁶. Of these 6,000 are forwarded to the supervisory boards (0.3%) and around 500 (0.03%) are appealed to the National Tax Tribunal.

The Central Customs and Tax Administration can revise the values assessed by the valuation committees.

Valuation Results

Table 11 shows the number of properties and the average land value and property value for different types of properties.

The property values are usually on average very close to the selling prices and thus to the market values of properties. The Central Customs and Tax Administration and the valuation committees will aim at that the property values on average should be about 5 percent below the selling prices around the valuation date, which is January 1. However, when the revaluation is carried out the sales from August will be the last known sales. The Central Customs and Tax Administration thus has to guess the development in property prices from August to January. For several years it has turned out that this guess has underestimated increases in property prices. The result has been that

⁶ The decreasing number of appeals is contributed to two factors. One is that the taxpayer now receives detailed information about how the estimated market value is calculated while he before only was informed about the assessed values. The other factor is that a system with annual revaluation results in a smaller number of appeals than a system where appeals could only be made every four years.

Table 11. Results of Revaluation 1998. DKK.

	Number of properties	Average property value	Average land value
One-family houses	1 068 000	797 000	193 000
Two- and three-family houses	27 800	902 000	231 000
Multi-dwelling houses and commercial properties	96 200	4 455 000	1 029 000
Freehold flats	174 900	476 000	79 000
Summer houses on freehold land	177 000	408 000	132 000
Factory and warehouse properties	17 700	6 275 000	1 247 000
Agricultural properties	112 600	1 865 000	403 000
Nursery gardens and horticultural properties	2 500	2 080 000	212 000
Woods, plantations, separately assessed	5 000	2 290 000	637 000
Building sites	98 700	258 000	226 000
State and municipal properties	14 107	10 882 000	2 217 000
Other assessed properties	121 100	1 522 000	302 000
Total	1 915 600	1 128 000	266 000

Source: Danmarks Statistik. Statistisk Aarbog 1999.

the property values have been considerably below the sales prices. At the revaluation in 1999 for example the property values for one family houses were 13 percent below sales prices, for summer houses 18 percent below, and for freehold flats 21 percent below. For the 2000-revaluation the guess about price the development from August to January has turned out to be quite correct. As a result the property values for one family houses is only 8 percent below sales prices and for summer houses and freehold flats the property values are 11 percent below sales prices.

12. Computerised Valuation Systems

In the period 1960-1980 computer registers were established containing the description of land and buildings, sales prices, valuation results and identification of the taxpayers. Collection was computerised and valuation notices, valuation list and lists of sales prices were printed by the computer systems.

In 1981 two very powerful valuation systems were established. The two systems are the Land Value System (Grundværdisystemet) and the Property Value System (Forslagssystemet). The two systems are very different in nature and they assist the valuation committees in different ways.

The Land Value System calculates the land values based on "prices" reported by the committees. This way the Land Value System primarily saves the committees from doing a vast number of calculations. The system also makes sure that the estimation of land values is based on the permitted land use and that different "prices" are used in different areas of the cities if sales prices indicate that one area is considered to be more attractive than the other area.

The Property Value System is similar to the systems called Computer Assisted Mass Appraisal (CAMA) in the USA. Based on statistical analyses of the sales prices they estimate models that are used to calculate property values.

In the Danish language the Property Value System is called the “Proposal System” to underline that the computer generated values are not the final values and that they are a tool for the valuation committees.

The land values calculated by the Land Value System are needed for the Property Value System. A revaluation thus has the following phases:

- Estimation of prices for the Land Value System and review of land value areas.
- Calculation of land values using the Land Value System and individual adjustments to the land values.
- Estimation of proposed property values using the Property Value System.
- Final decisions about land values, property values etc. by the valuation committees.

Land Value System

The Land Value System is applied for all properties.

The system calculates land values based on reported "prices" or updating factors. Each valuation circle is divided into “land value areas” with different permitted land use. The information about the permitted land use is transferred to the Land Value System from the Planning Register. For each land value area one price is reported.

In each land value area the land value for each property is calculated by one of the four “land value models”. The background for using four different models is the observation that the market for land operates differently for different types of land. The four models are:

- Industrial/public use model
- One family house model
- Block of flats model
- Agricultural model

For land for industrial or public use a simple model can be used. The reported price is the land value per square meter of land, and the land value for each plot is the land area times the price.

- Industrial model: $\text{Price} \times \text{Land area}$

The market for plots for one, two or three family houses or summerhouses is different and a more complicated model is needed. The decisive factor for the land value is that you can build a house of normal size on the plot. If the plot is larger than needed for this, then you will pay more for the land to be able to build a larger house and to have a larger garden. But the additional payment that you are willing to make is not proportional to how much bigger the plot is. Because of this a simple model (like the industrial model) can not be used since it will result in too high values for large plots and too low values for small plots.

Analyses in Denmark shows that half of the land value of a standard size plot (usually 800 square meter) is independent of the size of the plot and the other half is proportional to the size. The part of the land value that is independent of the size is called “the value of the building right” (byggeretsvaerdien). If the plot is large enough to be subdivided into two plots the value of the building right will double. The reported price will be the value of one square meter of a plot of the standard size (usually 800 square meter).

- One family model (subdivision not possible):
 $((\text{Price}/2) \times 800) + ((\text{Price}/2) \times \text{Land area})$
- One family model (subdivision into two plots possible):

$$(((\text{Price}/2) \times 800) \times 2) + ((\text{Price}/2) \times \text{Land area}) - \text{Costs of subdivision}$$

The calculated land value can be reduced if the plot is so small that a house of normal size cannot be built on the plot. The limits for this rule is if the possible house is smaller than 75 square meters, or 35 square meters in case of areas for summerhouses.

For land for blocks of flats or commercial use the decisive factor for the land value is the permitted building/land ratio. The reported price will be the land value per square meter of permitted floor area.

- Block of flats model: Price x Land area x Building/land ration

For agricultural land each farm often has land of different quality. Different land values per hectare are then used for the different parts of the land. In the Land Value System one or several updating factors is reported and then new values per hectare are calculated from the values used at the previous valuation.

- Agricultural model : Updating factor 1 x Previous price 1 x Land area 1
+ Updating factor 2 x Previous price 2 x Land area 2
+ Updating factor 3 x Previous price 3 x Land area 3
etc.

The valuation committee reports the prices to the land value system. The prices are estimated on the basis of analysis of vacant land sales. Also analysis of sales of plots with buildings are used for the estimation of prices to be reported to the land value system. An iterative system of preliminary runs of the Property Value System is carried out to make proposals for the “prices” to be reported for land value areas for one, two and three family houses and summer houses.

Notice that the land values are estimated according to the permitted land use, not according to the present land use. This means for example that the plot under a one family house need to be valued according to the “blocks of flats model” if that is the permitted land use. It also means that a large one family house plot should be assumed to be divisible even if the present building prevents subdivision. The possibility of subdivision needs to be recorded for each property. This will often require individual investigations since it cannot be determined from the size of the plot alone, but also the shape of the plot and the usual practice of the municipality are important.

For individual properties the valuation committees can make adjustments to the land values calculated by the Land Value System. These adjustments are carried forward to the next revaluation. The individual adjustments will be multiplied by an updating factor reported to the Land Value System.

Property Value System

The Property Value System is used for one, two and three family houses, freehold flats and summerhouses - that is for 75 percent of the properties. The system is also used to estimate the value of dwellings on farms.

For one, two and three family houses and for summerhouses the assessed land values are used in the estimation of the property values. The land values are subtracted from the sales prices. The differences – representing the “sales prices for the buildings” are then used to estimate a model for the building value. The description of the buildings recorded in the Building and Dwelling Register is used. The statistical analysis is carried out using linear multiple regression⁷.

⁷ The software used is SAS (Statistical Analyses System).

The model used for the regression analyses is estimating the building value per square meter of building area. Since one square meter in the basement is worth less than one square meter in the ground floor a part of the model calculates a total weighed floor area of the house.

The model used for the estimation of the building value per square meter of total weighed floor area is using the “base home approach”. This means that a “standard house” is defined. The model then estimates the value per square meter of the standard house and how the value per square meter should be increased or decreased if the house in question is different from the standard house.

The building value per square meter also varies with the location of the property. The land value will vary according to the location. However, the building value also varies with location. In a world where buildings are frequently demolished and new buildings constructed this should not be expected. But in Denmark the buildings are standing for one or two hundred years and there are no vacant plots available in most of the attractive areas. Thus both high land values and high building values cause the high prices paid for properties with an attractive location⁸.

In the model the local value per square meter of building area is the value after adjusting for the influence of location. The valuation committees decide for which areas there should be estimated a correction to the building value for location. The “correction area” is defined as a number of land value areas. Most valuation circles are divided into 5-10 correction areas. The rule of thumb is that there should be at least 25 sales of the given type of properties in each correction area.

Different models are used for different types of properties. The following models were used at the latest revaluation in 2000:

- One family detached houses
- One family terrace houses
- Two and three family houses
- Summer houses
- Freehold flats in blocks
- Other freehold flats
- Farm houses

For each type of property the same model is used for the whole country⁹. For different parts of the country the local value per square meter will vary due to location, but the model will be the same.

The models have the following four stages:

1. Total weighed floor area
2. General building value per square meter
3. Local building value per square meter
4. Total value (1 x 3 plus land value)

This is not the case for the models used for freehold flats. For these properties the land values are not used in the statistical analyses or in the calculation of the property values. The statistical

⁸ The statistical analyses in Denmark of sales of vacant plots and of properties including house shows that approximately half of the differences in value due to location are attributed to land values and half to building values. A one family houses sells for example for 1,500,000 DKK (of which 600,000 is estimated to be land value) in the most attractive area of the country, while a similar house sells for 300,000 DKK (land value: 60,000) in a remote area of the country.

⁹ Starting in 2001 there will be a difference between different parts of the country in the factors used for the calculation of the total weighed floor area. The difference is that secondary areas (like attic or basement) are more important in urbanised areas than in rural areas.

analyses directly estimate a model for the property value per square meter of floor area. The model has only three stages:

1. General property value per square meter
2. Local property value per square meter
3. Total value (2 x floor area)

The details of the model used for one family detached houses and for freehold flats in blocks are shown in the annex.

The models do not use any complicated mathematical terms¹⁰. This is done on purpose to make the models easily understandable for the valuation committees and for the taxpayers. Each model is described in a two-page form that can be used to simulate the calculations done by the model. These forms have been very important in making the valuation committees familiar with the functioning of the models. Since 1996 the details of the calculation of the property value is shown on the valuation notice to the taxpayers. This has been a very popular feature and has resulted in a decrease in the number of appeals.

Stability of the models from revaluation to revaluation is considered to be important. The structure of the models has been almost constant since 1981, though the value per square meter of the standard house and the various factors in the models have been changed according to the results of the statistical analyses of sales prices.

The valuation committees review each of the proposed property values calculated by the Property Value System. If the market value of the property in their opinion is different than the proposed value they are obliged to change the value. When they change a property value they report a code explaining the details about the reason for changing the value. Almost 100 different codes are used. The individual changes of values are carried forward to the next revaluation. If for example the property value is reduced by 15 percent due to bad maintenance, then the property value will be reduced by 15 percent at the next revaluation also. The code will indicate that the reason for the reduction is bad maintenance, and the valuation committee must then decide if the building is still badly maintained and if the reduction is still correct.

Savings and Increased Accuracy

The valuation systems do not replace human judgement in the valuation process. They do however perform a vast number of calculations and recordings, which before had to be done manually by the members of the valuation committees. For this reason the number of members of the valuation committees has been reduced from 3840 before the introduction of the computerised valuation systems in 1981 to 672 today. This has reduced the total cost of the valuation administration considerably.

At the same time the computer systems have increased the quality of the valuation. The values are today closer to the market values than before, and the equality between different areas has been increased.

¹⁰ Linear regression is applied. For the age of the building the relation between the value and the variable is not linear. The solution is to break age down to 5 different linear relations. The number of toilets and bathrooms has been changed to binary variables to deal with non-linear relations. No mathematical transformations of the variables have been used.

Use of Identity Numbers

The computer systems are based on the use of identity numbers assigned to each property and to each taxpayer.

Individuals, who are taxpayers of land tax, service tax or property value tax, are identified by the Civil Registration Number (Centrale Person Register, CPR). This number is assigned to each person at birth or immigration. The Civil Register is continuously updated when individuals change address. The taxpayers do not need to tell the tax administration about changes of address because the collection registers and valuation registers will be updated automatically from the Civil Register.

The identity number assigned to them by the tax administration identifies corporations or other legal persons, who are taxpayers of land tax or service tax.

The property tax office of the municipality assigns a property number to each property that is valued as one unit. A property consists of one or several cadastral plots and the buildings on them. A property can also be a freehold flat, which does not have a separate cadastral number, or a building forming a property apart from the land. The property number is the primary identification for valuation and taxation.

The cadastral numbers are assigned by the National Cadastre to each plot when it is being created. The cadastral number is used for identification of the property when immovable property is transferred and the transaction is recorded in the Land Registry.

All dwellings and most other properties also have a unique address that can be used for identification with 100 percent certainty. There are rules that all roads need to have a name, all houses need to have a street number, and how flats inside a building are identified.

GIS is not Used

Geographical Information Systems, GIS, are not used for the valuation procedures. The addresses are used to define the land value areas and other geographical areas. The cadastral numbers are used to find plots on the cadastral maps. In 1997 the National Survey and Cadastre completed a digital cadastral map for the whole country. However, since a payment 9 million DKK is required to use the digital cadastral map there are no immediate plans for using it. There are plans for starting experiments with using inexpensive digital street maps for displaying sales prices.

13. Valuation of Agriculture

Land Value

The land values for farms are calculated according to “the farm rule” (bondegaardsreglen) in the Law of Valuation. The rule says that it should be assumed that the land is part of a medium size farm in average stage of cultivation. The land value should only reflect the agricultural quality of the land and the prices paid in that part of the country for land of this quality. The actual state of cultivation (how well the farmer has maintained the land) should be disregarded so that the taxbase became independent of the farmer’s diligence or negligence.

The size of the farm to which the land belongs should also be disregarded. Traditionally, the prices per hectare paid for small plots of land or for land of a small farm were much higher than the prices per hectare paid for very large plots or the land of a large farm. The reason was that a farmer would pay a high price per hectare for a small plot of additional land, because he could farm that land using his own buildings. He would pay a lower price per hectare for a large plot because he would

need larger buildings to be able to farm that land effectively. The farm rule thus secures that land of the same quality in a certain part of the country has the same land value per hectare (and the same payment of land tax) whether the land is part of a small or a large farm.

Another feature of the farm rule is that it is possible to make a set of land values per hectare that can be used as a guideline for the valuation of agricultural land. Table 11 shows the land values per hectare decided by the National Tax Board for the 1999 and 2000 revaluation. The difference

Table 11. Guideline for Land Value per Hectare for Agricultural Land of Medium Quality.

	Revaluation in 1999	Revaluation in 2000
North East Zealand	27 000	31 100
Rest of Zealand	20 500	23 600
Lolland and Falster	24 700	28 400
Bornholm	9 600	11 000
Funen	22 400	25 800
South Jutland	15 200	17 500
East Jutland	18 800	21 600
West Jutland	13 200	15 200
North Jutland	10 900	12 500

between the different parts of the country reflects the differences in the market value of land for agricultural properties and differences in what the medium land quality is in each part of the country. One hectare of agricultural land of a given quality will have a different market value in different parts of the country because of differences in the costs of getting the output to the market and differences in how attractive it is to live on a farm in that part of the country. The lowest prices are paid on the island Bornholm where transport costs are high and values of dwellings are low.

The table shows the values for land of medium bonity. Land of higher or lower bonity should be valued higher or lower. One farm often has land of different quality. In that case each part of the land is valued at different values per hectare.

In the table all the values for 2000 are 15 percent higher than for 1999. Thus for the revaluation in 2000 the updating factor 1.15 was reported to the Land Value System to be used for the calculation of new land values for farms etc.¹¹. At some earlier valuations there has been different updating factors for high and low values or for different parts of the country.

The land values per hectare shown in table 10 include the part of the land value that can be contributed to the dwelling on the farm. It would be more accurate to estimate this part of the land value as a lump sum per farm, but a court ruling has prohibited that. Adjustments then have to be made for small or large farms when the property value is estimated.

¹¹ The different prices per hectare used for different parts of a farm reflect the differences in bonity, but no technical details about the bonity is used for the valuation process.

Property Values

Until the 1970'ies conditions for agriculture were such that application of “the farm rule” still made good sense. To estimate the property values of farms it was necessary to use the concept of “additional plot value” (tillægspærcehverdi). This was a value that had to be added to the land value to arrive at the property value of an unbuilt plot of agricultural land or a farm where the farm buildings had very little value¹². The additional plot value was between 50 percent and 150 percent (highest for the lowest quality land) and it was used to calculate the property value of unbuilt agricultural plots of land and as a minimum property value for farms (plus the building value of the farm house). The additional plot value would vary with the local demand for extra agricultural land.

$$\begin{aligned} \text{Property value} &= \text{Land value} \\ &+ \text{Technical value of farm buildings or Additional plot value} \\ &+ \text{Building value of farm house} \end{aligned}$$

The development within agriculture since the seventies have made it more and more difficult to make good sense of the way the “farm rule” is applied. New regulations and the subsidies given by the European Union have added new factors that influence the value of farms. In many cases the price paid for a farm is payment for the land and for the rights in relation to EU programs and the buildings does not contribute anything to the selling price. The reason is that the buyer today usually can farm the land from his own buildings and have no use for the buildings on the farm he purchases. Also the EU systems like “milk quotas”, “hectare subsidies” and “fallow fields” have a considerably influence on the market value of a farm.

The result of the new development and the way the guidelines for land values are decided is that the “additional plot value” today is between 150 and 400 percent. The size of “additional plot value” will vary with the local demand for extra agricultural land and with what “right” each farm has in relation to the EU programs. The size of “additional plot value” also varies with the quality of the land, being higher for the lower qualities. To day the market value of land is almost independent of the quality of the land and the decisive factors are the EU programs and various environmental regulations.

For each farm the technical values of the farm buildings (using cost figures and depreciation for age and for the state of maintenance) has to be estimated. The “additional plot value” should also be estimated. The higher of the two figures should be used for the calculation of the property value. On the valuation notice the taxpayer is informed about both the “additional plot value” and the technical value of the farm buildings and about how the property value is calculated.

For most farms where there are no animals the technical value of the farm buildings is lower than the “additional plot value”. For these farms the property value is the land value plus the “additional plot value” plus the building value of the farmhouse. The market value is for these properties decided by the market value of the land alone (plus the building value of the farmhouse) and the farm buildings do not contribute to the market value.

For farms with animals the value and size of the farm buildings are much higher than for farms without animals. For most of these farms the technical value of the farm buildings is higher than the “additional plot value”, and the technical value should be used for the calculation of the property value.

¹² For the farm the building value of the farmhouse also had to be added to the land value plus the “additional plot value” to arrive at the property value.

For small farms and especially for farms near larger cities it is necessary to determine whether the property should be valued as a farm or as a one family house. Most farms with land smaller than 5 hectare where there is only plant production are valued as one family houses.

14. Gathering and Analyses of Market Information

Sales prices are the only direct evidence of the market value of properties. The gathering and analyses of sales prices is therefore the basis for the estimation of market values of immovable property. Rents are an important indirect evidence of market values, and this type of information must also be gathered and analysed. Finally, information about construction costs and depreciation must be gathered for those types of properties where neither sales prices nor rents are available.

The sales prices are gathered from “sales report forms”. The lawyer, who carries out the transfer, usually fills out this form and the buyer and the seller sign it. Before the Land Registry can register a transfer the deed must be presented to the municipality. The municipality will ensure that various legal rules concerning agriculture, subdivision and freehold flats are observed, and they will write the latest property value on the deed¹³. When the lawyer presents the deed to the municipality he is required to hand in a filled out sales report form. The municipality will check that the contents of the sales report form is the same as the contents of the deed and they will write the property number, the property value and the land value on the sales report form.

The municipalities will use the sales report form to update their Valuation and Collection Register with the name, address and identity number of the new owner. The identity number will be the Civil Registration Number for individuals and the tax identity number for legal persons.

The sales report forms are sent to the Central Customs and Tax Administration who will enter the information into the Register of Sales Prices. The cash equivalent sales prices will be calculated based on the formal sales prices and the information given on the form about the mortgages taken over as part of the sales contract. It is noted if the sale is an open market sale. This is the case if the parties have not noted on the form that the sale is between family members, an auction sale, an inheritance or a full or partial gift. Sales of one family houses and freehold flats to legal persons are also not considered to be open market sales because many of them will be a transaction between an individual and a corporation that he controls. For rental properties the Register of Sales Prices will contain the information about the total annual rent (including an estimated rent from the owner). The rent information is given on the sales report form.

The information in the Register of Sales Prices is used for the following activities:

- Sales statistics
- Sales lists
- Data card for each property
- Analyses for the Property Value System

The sales statistics is a 100-page book published twice a year. The purpose is to inform the public and the valuation committees about the trends in property prices. Only open market sales are included. The statistical tables will show the number of open market sales, the average property value, the average sales price and the average difference between the sales price and the property value. The crucial information is the percentage difference between sales price and property value. For the period of a revaluation this figure shows how well the property values correspond to the sales prices. The percentage differences also show the trend in property prices. The trend can be calculated by comparing the figures for the difference for two periods. The publication also

¹³ The property value is the basis for the calculation of the stamp duty if the property value is higher than the declared sales price.

includes tables of index figures and graphic representations of the trends in property prices for different types of properties.

The sales lists show the information about all sold properties in a valuation circle. They are sent to the valuation committees to support their estimation of market values.

The sales information is also included in the data card produced for each property at a revaluation. The data card includes the description of the land and buildings, the results of the previous revaluation and the values calculated by the Land value System and the Property Value System. In addition the data card includes the sales information for properties that were sold.

Finally the sales prices are used for the statistical analyses for the Property value System. Based on the estimated property price trends the sales prices are adjusted so that they correspond to the date of valuation.

Every four years the Ministry of Housing and Urban Affairs will arrange for all owners of rental properties to report the total annual rent (including an estimated rent from the owner). The rent information is recorded in the Building and Dwelling Register and then used for property valuation and for other statistical purposes.

15. Tenure and Regulations of Immovable Property

Almost all properties are in private ownership. Table 9 shows that only 14,100 properties are in public ownership. This is 0.7 percent of the total number of properties. The value of the public properties is 7.1 percent of the total value of all properties. In addition there are 2,600 municipal dwelling and commercial properties with an average property value of 2.7 million DKK.

In 1967 new legislation allowed existing multi-dwelling houses to be subdivided into freehold flats¹⁴. This has resulted in a rapid increase in the number of owner-occupied dwellings. Table 12 shows that today 53 percent of the dwellings are owner-occupied. Table 10 shows that the total number of freehold flats is 175,000 of which only 27,000 are rented. There are 177,000 summerhouses on freehold land plus a considerable number of weekend cabins in allotments on municipal land.

There are some restrictions on ownership of certain types of properties. Farms can only be owned by individuals and not by corporations. The owner must be operating the farm and reside on it. For farms larger than 30 hectares the owner needs to have been educated as a farmer. Only residents of Denmark can own a summerhouse.

Dwellings are also regulated. You can only use one dwelling. If you are the owner of a dwelling, that you are not using, you have to rent it out. In the cities and the larger towns the rent for dwellings is controlled.

The planning regulations are rather strict. In rural zones you cannot make new buildings for other purposes than agriculture or similar activities. Summerhouses can only be constructed in designated recreational zones and never close to the coasts. New buildings for housing, industry, commerce or other urban activities can only be constructed in the designated urban zones.

Table 12. Tenure in Housing. 1997.

	Percentage
--	------------

¹⁴ The whole building has to be subdivided.

Owner-occupied	53.0
Privately owned rented accommodation	19.5
Non-profit housing associations	18.9
Private co-operative flats	5.6
Publicly owned residences	1.7
Student residences	1.3
Total (total number of residences: 2 447 100)	100.0

Source: Bygnings- og Boligregistret, Danmarks Statistik.

Facts about Denmark

Area: 43,095 km²

Population: 5.3 million (1999)

Currency: Kroner (DKK)

1 EUR = 7.50 DKK, 1 USD = 8.20 DKK (7/8 2000)

Two levels of local government: 14 counties and 275 municipalities

See also the internet publication at <http://www.um.dk/english/danmark/>

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ANNEX – Computerised Valuation

A. Model Used for One Family Detached Houses. Total Value System. 2000

Definition of the standard house:	
<ul style="list-style-type: none"> • Constructed in 1965 • No rebuilding • 1 toilet • 1 bathroom • Own kitchen • District or central heating • Walls of bricks, half timber, PVC, glass or “other” • Roof of tile • Area of ground floor between 80 and 140 square meter 	
Stage 1	Total weighed floor area: 100% of ground floor + 60% of utilised attic area + 60% of second floor + 25% of basement + 20% of garage and outhouse (max. 100 square meter)
Stage 2	General building value per square meter of total weighed floor area: 5025 DKK General value per square meter for the standard house - 6 DKK per year the building is older than from 1965 (down to 1850) + 69 DKK per year the building is more new than from 1965 + 34 DKK per year the building is more new than from 1975 + 44 DKK per year the building is more new than from 1980 - 85 DKK per year the building is more new than from 1990 (to reduce the rate of increase) + 22 DKK per year of difference between year of rebuilding and year of construction (not lower than 1965) + 30 DKK per square meter of ground floor smaller than 80 square meter - 8 DKK per square meter of ground floor bigger than 140 square meter (max 230 square meter) - 300 DKK if the building does not have a toilet (water closet) + 300 DKK if the building has two toilets + 450 DKK if the building has three or more toilets - 550 DKK if the building has no bathroom (shower or bathtub) + 150 DKK if the building has two or more bathrooms - 425 DKK if there is no heating or if heating is with gas or stoves - 100 DKK if the heating is with electricity + 100 DKK if there is supplementary heating - 400 DKK if the building does not have its own kitchen - 450 DKK if the walls are lightweight concrete, eternite, metal or concrete elements + 550 DKK if the roof is thatched - 300 DKK if the roof is cement stone - 400 DKK if the roof is eternite, metal, PVC, glass or “other” - 450 DKK if the roof is “built-up” - 675 DKK if the roof is roofing felt
Stage 3	Local building value per square meter of total weighed floor area: General value per square meter +/- the correction for location
Stage 4	Proposed property value: Building value (total weighed floor area x local value per square meter) + Land value
The local building value per square meter for the standard house varies between 11,000 DKK in the most attractive parts of the Greater Copenhagen area to 2,500 DKK in the most remote areas.	

B. Model Used Freehold Flats in Blocks. Total Value System. 2000

Definition of the standard flat	The flat
The building: <ul style="list-style-type: none"> • Constructed in 1965 • No rebuilding • More than 8 flats • No lift 	<ul style="list-style-type: none"> • 1 toilet • 1 bathroom • Own kitchen • Heating by electricity or central heating • Second floor or higher • Area between 65 and 100 square meter
Stage 1	General property value per square meter of floor area: <ul style="list-style-type: none"> 9525 DKK General value per square meter for the standard flat + 29 DKK per year the building is more new than from 1965 + 222 DKK per year the building is more new than from 1980 + 12 DKK per year of difference between year of rebuilding and year of construction (not lower than 1965) + 12 DKK per square meter of floor area smaller than 65 square meter - 13 DKK per square meter of floor area bigger than 100 square meter (max 150 square meter) - 250 DKK if the flat does not have a toilet (water closet) or only have access to one + 175 DKK if the flat has two toilets or more - 550 DKK if the flat has no bathroom (shower or bathtub) or only access to one + 350 DKK if the flat has two or more bathrooms + 50 DKK if there is district heating - 100 DKK if the heating is with gas or stoves - 400 DKK if there is no heating - 250 DKK if the flat does not have its own kitchen + 50 DKK if there is a lift - 1275 DKK if the flat is in the basement - 225 DKK if the flat is on the ground floor and the building has more than 5 flats + 400 DKK if the building has less than 9 flats
Stage 2	Local property value per square meter of floor area: <ul style="list-style-type: none"> General property value per square meter +/- the correction for location
Stage 3	Proposed property value: <ul style="list-style-type: none"> Building value (total weighed floor area x local value per square meter) + Land value
Stage 4	Proposed total value: <ul style="list-style-type: none"> Floor area x local property value per square meter
The local property value per square meter for the standard flat varies between 14,000 DKK in the most attractive central parts of Copenhagen area to 3,500 DKK in small remote towns.	