

The financial report of the universities: maintaining academic standards? An empirical research to the size with explanation of the differences

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The Financial Report of the Universities: maintaining academic standards?
An empirical research to the size with explanation of the differences

Dr. F.G. Volmer (Maastricht University)

June 2001

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Abstract

This paper describes research done concerning the size, level and explanation of the financial reports of 14 Dutch universities.

Based on earlier research in the USA concerning the financial report of universities, 14 Dutch financial reports are examined. See the Tables.

In spite of the regulations the quantity and quality of the financial university reports diverge much, in particular the information provided about costs and output of education and research varies from university to university.

For an explanation of the data a number well-known hypothesis such as Zimmerman's size, debt/equity hypothesis were tested first. After that a disclosure index was developed for expressing the several information items in a unique report mark per university.

The results can be explained by the kind of university, the size (number of students and revenues) and the long-term liabilities, in accordance with the research abroad. Therefore the main conclusion is that the findings of the research outside the Netherlands such as the importance of size and long-term liabilities hold largely in the Netherlands, too.

1 *Introduction*

The universities have much impact on the local economy. Total costs and revenues of all universities together amounted to nearly 8 billions of guilders in 1998. The costs for making a graduate vary much per university from 153.000 to 568.000 guilders. Sound financial reporting may be important for insight in the spending efficiency and discussions about the promoting of the efficiency.

Groves, Pendlebury and Stiles (1997) stated:

"The cozy and comfortable world of the ivory tower image of an university is probably gone forever and universities have to learn to exist in a world where completion effects all of their activities".

History

The university of Leiden is the oldest university of the Northern Netherlands. Witkam (1980) described the finance of the university in the sixteenth century including the accounts. He found that at the beginning the finance was very difficult: in September 1513 was it necessary to borrow 1800 pounds at 12 % to pay the salaries of the professors during October.

In 1584 the retributions from Delfland and Rijnland in total amounted to 6600 pounds, gathered by all kinds of levying In 1584, the budget appropriated to the university amounted to 8000 guilders a year. The establishment of a library, the alimentionation of the driven away conventual's-dwellers of the university buildings cost a lot of money. Therefore, the curates and mayors wanted to be involved in he audit of the accounts and a resolution of May 20th, 1587 made the former executives relating to the lease of university lands.

In 1591, the States founded the Collegium Theologiae endowed with 8000 guilders a year, financed by the sale of nationalized monasteries.

The Rekenkamer (governmental audit office) played an important role with relation to the financial control in turbulent times: which properties belong to the university and has the university really received the promised money.

Accurate accounting and closing of the accounts or recording rights and promises by the Leiden University were a condition for surviving.

For many years, the Ministry of Education, Culture and Science (OC & W) strives for a cost model in agreement with the efficiency and effectiveness parameters of the institutions. In the former HOBK and STABEK models, the number of graduates and enrolled students were included.

In the recent cost performance model (PBM 2000), a distinction is made between the education performance such as number of graduates and research performance such as finished doctoral dissertations. The Maastricht Allocation (UMA 2000) works it out for the internal resources allocation. The performance measurement is in the center of interest and therefore comparative research of the financial reporting of universities turns out to be necessary The Commission Koopmans already found that the comparability of the university financial reporting could be improved. If the worst comes to the worst, the cost models missed a foundation.

2. Rules concerning financial university reports

2.1 the reporting rules in general (law, audit, responsibility of directors)

Article 2.9 of the Higher Education and Scientific Research Law regulates the (financial) report of the State-Aided Universities. The report consists of the annual accounts with the related budget, the Director's report and the other information. The report must show how far the subsidized tasks are executed and the level of efficiency used in the performance. The financial report renders an account of the financial control of a university over the last fiscal year. The report includes an opinion of an auditor. Article 2.14 provides that the Minister can give a lead concerning budget and report. Two separate financial reporting guidelines were issued: one for the schools (OC & W 1996, nr. 316), the other for the universities (OC & W 1995, nr. 31).

Both guidelines were rewritten in August 2000 and integrated in a combined guideline university reporting.

The annual accounts shall, on the basis of generally accepted accounting principles, give a true and fair view of the state of affairs and results of an university and to the extent that the nature of annual accounts permits, of its solvency and liquidity (article 2, 1995 rules)

2.2 the reporting rules in particular

Some features of the 1995 reporting rules

Books

In contrary to the Civil Code, books are a part of the tangible fixed assets, unless the amounts are written down immediately (article 7 Guidelines).

Securities

Investments not being long-term investments should be recorded under short-term investments subdivided in:

- The securities listed on the stock exchange and valued against the market price.
- The remaining securities valued against the lower of cost or market

The notes should disclose to what extent these investments are not at the free disposal of the legal entity.

Revaluation reserve fixed assets

The notes concerning owner's equity should disclose the revaluation reserve fixed assets (article 14 Guidelines). The donations to the reserve and the cost equalization provision are charged against the profit and loss account. Buildings are carried at cost less accumulated depreciation.

Provisions

The provision for maintenance is shown separately. In the notes the provisions for student relief-fund and the half pay after dismissal are disclosed separately, too.

Cash accounting

Cash accounting for holiday allowance, for the benefits for sick pay and for lecture fees is allowed (article 17 Guidelines). In the notes a cash flow statement is included and the average number of people employed broken down in function/category and principal cost center is disclosed (article 22 Guidelines).

Budget

The budget amounts concerning the statement of cost and revenues are disclosed (article 26-31 Guidelines).

Format

Article 24 of the Guidelines prescribes several balance sheet and statement of cost and revenues formats for filing purposes.

Revenues from third parties

The revenues from third parties are itemized by means of the nature of the activity and the type of principal.

2.3 New reporting rule (2000)

Some features of the new reporting rules:

- A cash flow statement based on the indirect method is prescribed, classified into cash flows from operating, financing and investment activities (article 27)
- Valuation at current cost is not permitted for universities. (Article 28-1)
- Work in progress is valued based on the completed contract method (article 28-9)
- Depreciation terms are prescribed: buildings before 2000 30 years, plants 15 years (article 29-6)
- Research and Development costs are expended as incurred (article 11)
- Investments are carried at cost or lower market price and if the actual value on the balance sheet differs significantly from the last known market price prior to the balance sheet date the difference should be mentioned in notes (article 28-2)
- The report-form annual accounts (enkelvoudige jaarrekening) form parts of the notes on the consolidated accounts, in contrary to the Civil Code (article 7)
- Consolidated accounts are mandatory in the case of decisive power of the university over an entity (article 7-3) The Civil Code uses the head of the group criterion
- The actual OZB (real estate tax) value and the calamity insurance value of buildings and land must be disclosed (article 12-3)
- Books and similar are not capitalized on the balance sheet (article 12-4), the yearly cost prices are disclosed
- As a minimum, provisions for maintenance and half-pay (wachtgelden) are prescribed, a reconciliation statement of all the provisions is disclosed (article 21)

The paragraphs of the Director's report (article 34) included (as a minimum):

- Characteristics of the university
- Students (binding study advice, study programs)
- Employees
- Efficiency
- Quality maintenance
- Education
- Research
- Internationalizing
- Teaching hospitals
- Accommodation
- Environment care
- Finance

3. *Earlier Research*

Hindi & Miller (2000) examined the assessment programs used by various accounting departments across the United States. Primary skills measured in assessment included professional knowledge, problem solving, and communication skills. A variety of assessment instruments were used including exit surveys for graduating seniors, student evaluations and alumni surveys. There was a statistically significant relationship between the highest degree awarded by the institution and the use of assessment. The higher the degree awarded, the greater the number of responses that identified meeting responsibility to students and to the public as primary uses of assessment data.

Groves, Pendlebury and Stiles (1997) investigated the application of strategic thinking and models into the British education scene. The cozy and comfortable world of the ivory tower image of a university is probably gone forever and universities have to learn to exist in a world where competition affects all of their activities. Strategic management techniques can make a substantial contribution to university management, but universities do not appear to conform readily to the corporate model of strategy making, because the nature of their processes and products (teaching, research and support services) is very different. Yet, an awareness of competitive position, advantage and scope and the value chain of a university can be useful tools for some prioritization between research selectivity, teaching excellence and income generation.

Broadbent, Laughlin, Willig-Atherton (1994) consider the nature of accounting in schools: Local Management of Schools (LMS). Accounting cannot be a decision instrument for the schools, but is very important as a communication tool: accounting information is being used as one element to justify and legitimate decisions; they are being used to convince others, as a tool of rhetoric, to play the budget game. Accounting information is used in a tactical way to communicate particular realities.

Pendlebury & Algaber (1997) stated that universities have traditionally relied on a top-slicing arrangement for recovering central support costs, rather than attempting to allocate these costs to academic departments benefiting from the central support. The results of their survey reveal that close to 50% of universities still rely on top-slicing, in other parts of the public sector, cost allocations are being increasingly replaced by service level agreements, internal market prices and market testing through competitive tendering. Allocation turns out to be too complex. However, the nature of much of the central support services in universities is not distinctly different from those in central and local government and therefore similar developments might be expected in the future.

The Commission Koopmans (1999) investigated the financial position of the universities. They concluded that the equity capital has a buffer function with a desired size of 10% of the government contribution revenues.

The Commission calculated the equity capital of all the universities together end 1997 on 3,557 million of guilders after writing down the buildings/land with 361 millions, equipment/books with 263 millions and increasing the half-pay provisions with 752 millions of guilders. Based on some assumptions all universities together have a capital deficit of 1.6 milliard of guilders.

Recommendations of the Commission Koopmans:

- The use of accrual accounting
- No distinction between general and special reserves
- Investments has carried on as current assets valued at market values
- No provisions for maintenance, but capitalizing of the outlays

Linking with his 1992 dissertation concerning the application of fund accounting to the municipal financial report, **Volmer** (1999) investigated the power of fund accounting to improve the financial control of the government. The agency model turned out to be such an application. Universities use specific funds carried on as provisions on the balance sheet for a long time already

Banker ca (1989) investigated school district financial reporting practices. Starting point was the financial report and the notes based on fund accounting (general fund, special revenue funds, capital projects fund, debt service fund) divided into balance sheet, statement of cost and revenues, budget. The compliance to the prescribed accounting rules was summarized in Disclosure Index. To explain the differences in financial reporting some factors are recognized: (pp 32-36)

1. Higher levels of Government;
2. Investors and Bond Analysts;
3. Auditors;
4. Coalitions
5. Professionalism;
6. Political Factors;
7. Cost of a Financial Reporting System;
8. State Financial Reporting Requirements.

The measurement was based on some proxy variables:

1. Government grants as a % of total revenues
2. The size of the long-term debts
3. The use of a public auditor
4. The number enlisted students
5. See 3
6. Private or public university
7. The revenues per student
8. Prescribed reporting rules by a State

Results: variables 2, 3 and 8 are significant.

Chase & Coffman (1994) tried to explain the accounting choice between cost and market value of the investments on the balance sheet of 330 higher education institutes.

From three explaining factors derived from earlier research, the size of the investments, the management compensation agreements and the relative size of the debt, only the first two factors turned out to be significant.

4. *Empirical research: Descriptive statistics (1998)*

Table 1 shows the key data such as the number of students, total revenues and the cost of a graduate.

The university of Utrecht has most students, followed closely by the university of Amsterdam (both about 21.600 students), after this the university of Groningen follows with about 4.000 students less. The same holds for the revenues (the university of Utrecht has more than 1 billion of guilders revenues). Based on costs the university order is Amsterdam, Groningen, Utrecht.

The university of Amsterdam has most graduates, followed by Groningen and Nijmegen.

Cost of a graduate varies from 568.000 guilders (Wageningen university) to 153.000 guilders (Tilburg university). The average cost of a graduate is 364.000 guilders. Declining interest in a field of study results in sharp increasing costs per student.

The private universities VU Amsterdam and Catholic University Nijmegen belong to the middle class based on the number of students (12.000 to 13.000), the university of Brabant is smaller (about 7.500 students). The average in the Netherlands is 12.250 students, 1.540 graduates, and 360.000 guilders costs per graduate. However, the standard deviation is high (about 50%),

Table 2 shows some key data.

Utrecht University has most equity capital (about 800 million guilders) followed by the universities of Delft and Amsterdam. It strikes that four universities run into

long- term debts. Erasmus University Rotterdam (57 billion of guilders), Polytechnic University Eindhoven (12 million guilders), Polytechnic University Twente and Utrecht University (3 to 4 millions of guilders'). The universities of Brabant and Delft have deficits. Most universities have exceptional income and expenses; those of the universities of Brabant, Wageningen and Eindhoven were unfavorable.

The size of the university financial report varies from 46 pages (Amsterdam University) to 149 pages (Erasmus University Rotterdam). The average amounts to 86 pages, the standard deviation is rather high (30 pages). The size of the financial report in a narrower sense is less by half (8.7 pages). Most universities provide information by consolidated statements with exception of the private universities, the Wageningen University and the Open University. Nearly all Universities showed (1998) reports of approval; Amsterdam University showed a report with reservation and Leiden University a statement of denial of opinion.

5. *Hypothesis*

Based on the research mentioned above, the following hypotheses are developed:

- (I) The more long term debt, the larger the size of the financial report (1), the annual accounts (2), the key data (3), the analysis of income (4) and the income from exploitation (5)

Based on the Debt/Equity hypothesis of Watt's & Zimmerman (1986)

"Ceteris paribus, the larger a firm's debt/equity ratio, the more likely the firm's manager is to select accounting procedures that shift reported earnings from future periods to current period" (pp. 216).). In the non-profit sector, *earnings shift* is replaced by more information about several qualitative objections, because performance and not profit is crucial here.

- (II) The higher total revenues and the lower the income, the more changes in accounting principles in the annual accounts.

See Watt's & Zimmerman again.

- (III) The higher the investments, the investment income and the financing by long term debt, the more market values for investments in the balance sheet shall be used.

See earlier research: Chase and Coffman (1994)

Results

The first hypothesis is correct with exception of the variable exploitation income:

	Adj Rsquare	coeff	t	P	F
Total Report	0.31	1.2	2.6	0.02	6.9
Annual Accounts	0.21	0.59	2.1	0.06	4.4
Key Data	0.62	0.07	4.8	0.00	22.4
Analyze Income	0.70	0.13	5.6	0.00	31.3
Exploitation Income	-0.07	-0.14	-0.4	0.72	0.14

The second hypothesis is correct

	Adj Rsquare	coeff	t	P	F
Exploitation income	0.34	-0.001	-2.36	0.04	4.41
Total revenues	0.34	0.0015	2.85	0.02	4.41

The third hypothesis is incorrect with exception of the variable investment income

	Adj Rsquare	coeff	t	P	F
Investment size	0.23	0.17	2.2	0.049	4.8

6. *Disclosure Research*

How to measure the qualities of financial reports of universities and which factors determine the level?

To answer the first question, a disclosure model will be developed consisting of the next variables (based on earlier research):

- The size of the financial report
- The practice of consolidation
- The structure of the cash flow statement
- The balance sheet notes
- The accounting principles
- The number of provisions/reserves
- The details of the statement of costs and revenues
- The information the output

See tables 1-8 to summarize this information in a single disclosure index, the scores of each of the elements are determined. See Table 9. As a rule the existence of an element determines the score (one point); the important element consolidation 9 points. However, a scale is used for determining the scores of some special elements:

Size of the report		Number of provisions	
< 31 pages	0	0-4 provisions	0
31-60 pages	1	5-7 provisions	1
61-90 pages	2	8-11 provisions	2
91-120 pages	3	>11 provisions	3
>120 pages	4		

Splitting up categories		Number of reserves	
Work for third parties			
0-4 elements	0	0-2 reserves	0
5-8 elements	1	3-4 reserves	1
9-12 elements	2	5-6 reserves	2
>12 elements	3	7-8 reserves	3
		>8 reserves	4

This measurement procedure is subjective indeed, but it makes comparison possible. See Table 9. The final score differs from 2.8 to 7.8 on a ten scale.

The proxy variables used by Banker ca (1989) in his research are adopted to explain the all-in Disclosure Index, with exception of Banker's variable 8 (State Regulations), because in the Netherlands only central level regulation exists in contrast to a federal state. So the used variables are:

- 1) Governmental subsidies in a % of total university revenues
- 2) The size of the long debts
- 3) The use of public auditors
- 4) The number of enlisted students
- 5) Private or public university
- 6) Revenues per student

Results

The number of enlisted students (var. 4), the kind of university (var. 5) and the revenues per student (var. 6) turned out to be significant: adj R square=0.30 P=0.09 See Table beneath

Independent variables	coeff	T	P
(4) Number of students (x1000)	-0.15	-2.5	0.03
(5) Kind university (1=private; 2=public)	1.75	2.3	0.04
(6) Revenues per student (x1000)	-0.04	-2.0	0.08
Constant	6.6		

The impact of the number of students and revenues per student are negative. The kind of university has a positive influence. The other variables are not significant.

The correlatiematrix shows the multicollinearity between the variables

	constant	var. (4)	var. (6)	var. (5)
constante	1			
Var. (4)	-0.56	1		
var. (6)	-0.58	0.61	1	
var. (5)	-0.37	-0.39	-0.44	1

In Table 11 explaining factors concerning parts of the financial report (S1-S8) are showed. The results are in short:

1. The size of the financial report and the use of internal auditors are correlated.
2. Public universities use more consolidated accountant than private universities.
3. The more universities depend on subsidies, the smaller the cash flow statements
4. The more exceptional income and the less the dependence of subsidies, the more extensive notes and analysis on the financial report.
5. The more university staff and higher deficits, the more advanced accounting principles (such as actual values and capitalizing of books)
6. Private universities and universities with external auditors has more provisions and reserves.
7. The more revenues per student the more extensive cost and revenues statements
8. The more enlisted students, the less information disclosures about performance (output).

Chase & Coffman investigated 330 higher education organizations to explain the relation between market values in the balance sheets and the size of the investments, the level of the investment performance, the long-term debt/ worth investments.

Only the first two factors turned out to be significant on 5% level.

In our research only the investment performance was significant on 7% level. However, only three universities (the poly techniques) used market values for investments on the balance sheet.

Limitations of the research

The results are limited by some important facts. The number of universities in the Netherlands is 14 only (Nijenrode University excepted) and only the year 1998 was investigated. Besides that, the financial report of a university is as a matter of fact not the only medium for communication. Or responsibility accounting. Several other ways do exist such as the scientific report and other university publications. More research over more years is indicated.

7. Conclusions

This paper describes research done concerning the size, level and explanation of the financial reports (1998) of 14 Dutch universities.

Based on earlier research in the USA concerning the financial report of universities, 14 Dutch financial reports are examined. See the Tables.

In spite of the regulations, the quantity and quality of the financial university reports diverge much, in particular the information provided about costs and output of education and research varies from university to university.

For an explanation of the data a number well-known hypotheses such as Zimmerman's size, debt/equity hypothesis were tested first. After that a disclosure index was developed for expressing the several information items in a unique report mark per university.

The results can be explained by the kind of university, the size (number of students and revenues) and the long-term liabilities, in accordance with the research abroad. Therefore the main conclusion is that the findings of the research outside the Netherlands such as the importance of size and long-term liabilities hold largely in the Netherlands, too.

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Table 1: key data universities 1998

Universities year: 1998	number of stu- dents	Total revenue mln gld	Total cost mln gld	number of gra- duates	cost/ graduate
Utrecht	21.635	1.037	997	3.124	319
Amsterdam	21.612	872	853	3.196	267
Groningen	17.366	782	757	2.420	312
Erasmus	13.910	533	524	1.861	281
Leiden	13.781	692	686	1.819	377
VU A'dam	13.370	643	593	1.665	356
TU Delft	13.002	779	794	1.615	492
Nijmegen	12.319	689	672	2.144	313
Maastricht	10.039	408	406	1.263	321
KU Brabant	7.519	186	186	1.215	153
TU Twente	5.648	362	355	816	435
TU Eindhoven	5.209	391	374	773	483
Wageningen	3.830	387	372	655	568
Open Univ.	21.856	100	102	286	355
Total	159.240	7.861	7.360	21.547	5.090
Average	12.249	562	526	1.539	364
Standard deviation	5.548	259	223	747	102

Table 2 Financial Key information universities 1998

Universi- ties year: 1998	equity capital mln gld	lg term debts mln gld	person- al cost mln gld (fte's)	exploit result mln gld	except. income mln gld
Utrecht	799	3	611	40	0

			(5667)		
Amsterdam	469	0	472 (3861)	21	2
Groningen	639	0	427 (3292)	25	0
Erasmus	483	57	278 (2612)	9	0
Leiden	266	0	367 (1979)	61	55
VU A'dam	454	3	344 (3345)	49	0
TU Delft	444	0	563 (4490)	-2	13
Nijmegen	444	0	376 (3812)	18	1
Maastricht	334	0	207 (2016)	3	0
KU Brabant	183	0	135 (1155)	-6	-10
TU Twente	300	4	228 (2197)	7	0
TU Eindhoven	336	12	231 (2397)	13	-4
Wageningen	264	0	235 (2358)	6	-9
Open University	69	0	63 (559)	1	3
Total	5484	79	4537	245	51
Average	392	5.6	2839 (324)	17.5	3.6
Standard deviation	185	15.1	1345 (157.5)	20	15.7

Table 3: Financial Report universities 1998

University year: 1998	fin. report pp ()= score 1	annual accounts pp. (+appendices)	consolidation ()= score 2	opinion auditor	auditor firm	parts cash flow statement (score3)
Utrecht	90 (2)	27	yes (9)	approval	KPMG	3
Amsterdam	46 (1)	34	yes (9)	reservation	KPMG	2
Groningen	68 (2)	41	yes (9)	approval	Price Waterh	3

Erasmus	149 (4)	52 (79)	yes (9)	appro- val	intern	3
Leiden	95 (3)	31 (58)	yes (9)	denial of opin	intern	3
VU A'dam	120 (3)	21 (30)	no (0)	appro- val	intern	2
TU Delft	60 (1)	32 (60)	yes (9)	appro- val	KPMG	2
Nijmegen	57 (1)	36 (57)	no (0)	appro- val	Ernst Young	3
Maastricht	80 (2)	27	yes (9)	appro- val	KPMG	3
KU Brabant	136 (4)	34 (56)	no (0)	appro- val	Price Waterh	3
TU Twente	70 (2)	30	yes (9)	appro- val	Ernst Young	3
TU Eindh- oven	82 (2)	21	ja (9)	appro- val	Ernst Young	1
Wageningen	84 (2)	18 (35)	neen (0)	appro- val	Ernst Young	3
Open Uni- versity	72 (2)	29	neen (0)	appro- val	Ernst Young	2
Total	1209	433	81	12 +	3 int	36
Average	86	31	(5.8)	1 ?	12 ext	2.6
Stand.dev	30	8.7		1 -		0.6

Table 4: Notes with relation to the Balance sheet

University year: 1998	key data	info about future	budget	multi years analysi s	analy- sis perform ance	total score 4
Utrecht	0	0	1	0	1	2
Amsterdam	1	1	0	1	1	4
Groningen	1	0	0	1	1	3
Erasmus	1	0	1	1	1	4
Leiden	1	1	1	1	1	5
VU A'dam	1	0	0	1	1	3

TU Delft	0	0	1	0	0	1
Nijmegen	1	0	0	0	1	2
Maastricht	1	0	0	1	1	3
KU Brabant	1	1	0	1	1	4
TU Twente	1	1	0	1	1	4
TU Eindhoven	1	0	0	1	1	3
Wageningen	1	1	0	1	1	4
Open University	0	0	1	0	1	2
Total	11	5	5	10	13	44
Average	79 %	46 %	46 %	72 %	93 %	3.1

Table 5: Accounting (valuation) principles

University: year 1998	ex- plai- ning princ iples	explai ing ac count- ing change	notes intan gible s	notes actual values	depre ciate build -ing 30 years	books on ba lance sheet	depre ciati on on books	score (5)
Utrecht	0	1	1	1	1	0	0	4
Amsterdam	1	1	0	0	1	0	0	3
Groningen	1	0	0	0	1	0	0	2
Erasmus	1	0	0	0	0	0	0	3
Leiden	1	0	0	0	1	0	0	2
VU A'dam	1	0	0	1	0	0	0	2
TU Delft	1	1	1	1	1	0	0	5
Nijmegen	1	1	1	1	1	0	0	5
Maastricht	1	0	0	1	0	1	0	3
KU Brabant	1	1	0	1	0	1	1	4

TU Twente	1	0	0	1	1	1	0	4
TU Eindhoven	1	0	1	1	1	0	0	4
Wageningen	1	0	0	1	0	0	1	3
Open University	1	0	0	0	0	0	0	1
Total	13	5	4	9	8	3	2	45
Average	87 %	36 %	29 %	64 %	57 %	21 %	14 %	3.2

Table 6: Contingencies (provisions) and reserves

University : year 1998	number of provisions (score)	maintenance provision	provision for students	number of reserves (score)	total score (6)
Utrecht	2 (0)	1	0	4 (1)	2
Amsterdam	11 (2)	1	1	1 (0)	4
Groningen	4 (0)	1	1	4 (1)	3
Erasmus	3 (0)	1	1	4 (1)	3
Leiden	4 (0)	0	1	2 (0)	1
VU A'dam	8 (2)	0	1	2 (0)	3
TU Delft	10 (2)	0	1	8 (3)	6
Nijmegen	16 (3)	1	1	9 (4)	9
Maastricht	9 (2)	1	1	2 (0)	4
KU Brabant	9 (2)	1	1	7 (3)	7
TU Twente	10 (2)	1	1	7 (3)	7
TU Eindhoven	5 (1)	1	1	1 (0)	3
Wageningen	5 (1)	0	1	4 (1)	3

Open Uni- versity	11 (2)	1	0	1 (0)	4
Total	107	10	12	56	59
Average	7.6	71 %	86 %	4	4.2

Table 7: Statement of cost and revenues

University year: 1998	muta- tion work in progres s	income invest- ments	excep- tional income	info about work third parties	total score 7
Utrecht	0	0	0	3	3
Amsterdam	1	0	1	2	4
Groningen	1	0	0	2	3
Erasmus	1	0	0	1	2
Leiden	1	0	1	2	4
VU A'dam	1	0	0	2	3
TU Delft	0	1	1	1	3
Nijmegen	1	0	1	1	3
Maastricht	1	0	0	1	2
KU Brabant	1	0	1	0	2
TU Twente	1	0	1	2	4
TU Eind- hoven	1	0	1	0	2
Wageningen	1	0	1	3	5
Open Univer- sity	0	1	1	0	2
Total	11	2	9	20	42
Average	79 %	18 %	64 %	1.4	3

Table 8: Output per faculty

Universi- ty year: 1998	work third partie s per fac	cos t per fac .	inco- me/ fac	prop exam /fac	doct exam /fac	diss	publ	score (8)
Utrecht	1	1	0	1	1	0	0	4
Amsterdam	1	1	0	0	0	1	0	3
Groningen	1	1	1	1	1	1	0	6
Erasmus	0	1	1	1	1	1	0	5
Leiden	1	1	1	1	1	1	1	7
VU A'dam	0	1	0	1	1	1	1	5
TU Delft	1	1	1	0	1	1	0	5
Nijmegen	1	1	0	0	0	1	0	3
Maastricht	1	1	1	1	1	1	1	7
KU Brabant	0	1	0	1	1	1	1	5
TU Twente	1	1	0	1	1	1	1	6
TU Eind- hoven	0	0	0	1	1	1	1	4
Wageningen	0	1	1	1	1	1	1	6
Open Uni- versity	0	1	0	0	0	0	0	1
Total	8	13	6	10	11	12	7	67
Average	57 %	93 %	43 %	71 %	79 %	86 %	50 %	4.8

Table 9: Recapitulation scores

University year 1998 scores max	S 1	S2	S3	S4	S5	S6	S7	S8	t o t s c o r e 50	mar k 1- 10
Utrecht	2	9	3	2	4	2	3	4	29	5,8
Amsterdam	1	9	2	4	3	4	4	3	30	6,0
Groningen	2	9	3	3	2	3	3	6	31	6,2
Erasmus	4	9	3	4	3	3	2	5	33	6,6
Leiden	3	9	3	5	2	1	4	7	34	6,8
VU A'dam	3	0	2	3	2	3	3	5	21	4,2
TU Delft	1	9	2	1	5	6	3	5	32	6,4
Nijmegen	1	0	3	2	5	9	3	3	26	5,2
Maastricht	2	9	3	3	3	4	2	7	33	6,6
KU Brabant	4	0	3	4	4	7	2	5	29	5,8
TU Twente	2	9	3	4	4	7	4	6	39	7,8
TU Eind- hoven	2	9	1	3	4	3	2	4	28	5,6
Wageningen	2	0	3	4	3	3	5	6	26	5,2
Open Uni- versity	2	0	2	2	1	4	2	1	14	2,8
Total	31	81	36	44	45	59	42	67	405	81
Average	2.2	5.8	2.6	3.1	3.2	4.2	3	4.8	29	5.8
Stand.dev	1.0	4.5	0.6	1.1	1.2	2.2	1.0	1.7	6.1	1.2

Table 10: explaining variabeles in the disclosure model

University year: 1998	number of stu- dents	revenu- es per student	inco- me from expl	% sub- sidy	% long term debt/ asset s	publi c audi- tor	priva te(1)/ publi- c(2) univ.
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Utrecht	21635	47932	40	72.8	0.2	1	2
Amsterdam	21612	40348	21	70.8	0	1	2
Groningen	17366	45031	25	70.9	0	1	2
Erasmus	13910	38318	9	66.7	7.5	0	2
Leiden	13781	50214	61	72.5	0	0	2
VU A'dam	13370	48093	49	70.1	0.5	0	1
TU Delft	13002	59914	-2	74.7	0	1	2
Nijmegen	12319	55930	18	66.7	0	1	1
Maastricht	10039	40641	3	68.6	0	1	2
KU Brabant	7519	24737	-6	64.6	0.2	1	1
TU Twente	5648	64093	7	67.7	2.1	1	2
TU Eindhoven	5209	75062	13	75.8	2.3	1	2
Wageningen	3840	100781	6	66	0	1	2
Open Universiteit	21856	45754	1	73	0	1	2
Totaal	181106	736848	245	981	13	11 E	11 R
Gemiddeld	12936	52632	17.5	70.1	0.9	3 I	3 B
Stand.afw	6112	18497	20	3.4	2.0		

Table 11: Explaining variables for sections Univ. report

	publ audi- tor	perc. subsi- dy	except income	defi- cit	privat e/pu- blic univ- ers	revenu- es/ student	number of stu dents	number fte's
Size re- port	$r^2=0.43$ $P=0.02$							
consoli- dation					$r^2=0.45$ $P=0.01$			
cash flow sections		$r^2=0.47$ $P=0.01$						
expl notes balance sheet		$r^2=0.27$ $P=0.04$	$r^2=0.27$ $P=0.09$					
valuation principl				$r^2=0.43$ $P=0.07$				$r^2=0.43$ $P=0.06$
provisi- ons/reser ves	$r^2=0.48$ $P=0.02$				$r^2=0.48$ $P=0.01$			
statement cost/reve nues						$r^2=0.27$ $P=0.03$		
output report							$r^2=0.21$ $P=0.06$	

Table 12 Explanation valuation principles investments
universities 1998

Universities year: 1998	market value =1	Rate of return % investm.	% Lterm Debt/in- vestment	book value investm
Utrecht	0	5.5	1.1	282.8
Amsterdam	0	4.1	0	199.3
Groningen	0	5.2	0	153
Erasmus	0	3.7	58.9	96.7
Leiden	0	4.7	0	107.5
VU A'dam	0	4.2	1.1	262
TU Delft	1	3.8	0	233
Nijmegen	0	5.2	0	270.7
Maastricht	0	2.3	0	33.2
KU Brabant	0	3.8	0	85.2
TU Twente	1	6.2	4.0	101
TU Eindhoven	1	7.9	12.2	98.2
Wageningen	0	4.2	0	33.7
Open Univ.	0	4.4	0	56.7
Total	3	65	77.3	2013
Average	0.4	4.7	5.5	144
Standard deviation	0.2	1.3	65.8	134