Outline of the case study analysis

In order to examine how IAS 38 ”Intangible assets” is applied in practice by EU corporations, we surveyed the accounting treatment of internally generated development costs of fifty large corporations using their published annual reports for fiscal 2007. The survey covered the corporations in the industries where we expected that the percentage and amount of R&D expenditures are large compared with other industries and there are strong needs from investors to disclose the amount of the capitalized development costs, including pharmaceuticals and automotive.

The data available for this analysis cover only three years at the longest because mandatory application of IFRSs in Europe started in 2005. Readers should keep in mind that the data volume currently available is as yet not enough for an adequate time series analysis.

Summary of analysis results

The industries surveyed can be categorized largely into the following three groups.

I. Industries where few companies capitalize internally generated development costs and most companies charge them to income as incurred.

II . Industries where all companies capitalize large amounts of internally generated development costs.

III. Industries where some companies charge all internally generated development costs to income as incurred and other companies capitalize them, that is, there is divergence in accounting treatments

I. Industries where few companies capitalize internally generated development costs and most companies charge them to income as incurred

(i) Pharmaceutical industry (surveyed companies: 6)

- Except for one company, internally generated development costs were fully charged to income as incurred.
- The reasons for not capitalizing internally generated development costs are uncertainties about regulatory approval for new drugs and so on.

(ii) Food and beverage industries (surveyed companies: 7)

- Except for one company, internally generated development costs were fully charged to income as incurred.
- The reason for not capitalizing internally generated development costs is large uncertainty about the future economic benefits generated by the new products.

(iii) **Chemical industry (surveyed companies: 5)**

- Three companies capitalized only a very small part of internally generated development costs and the other two charged all internally generated development costs to income as incurred.
- We guess that the companies in chemical industry are cautious in capitalizing internally generated development costs due to concern for the uncertainties about commercialization of products, because this industry is close to the pharmaceutical industry and some companies are engaged in both.

II. Industries where all companies capitalize large amounts of internally generated development costs

Automotive (finished vehicles) industry (surveyed companies: 6)

- All companies capitalized internally generated development costs.
- Capitalized amounts range between 29% and 53% of the total R&D expenditures.
- Since the total R&D expenditure above includes research costs (which is required to be charged to income as incurred), the percentages of capitalized development costs on development expenditure is higher than the above figure.
- There are two types of disclosures about the scope of capitalized development costs: (ⅰ) broad description such as direct and indirect costs directly attributable to development projects and (ⅱ) enumeration of the components such as direct personnel expenses and cost of prototypes.
- In general, the companies amortize the capitalized development costs from the start of production over the expected useful lives of the products. Amortization period is generally up to seven years but there is diversity. Amortization periods are longer than the automotive parts and electrical devises industries.

III. Industries where some companies that charge all internally generated development costs to income as incurred and others capitalize part of them, that is, there is divergence in accounting treatments

(i) **Automotive parts industry (surveyed companies: 7)**

- Among the seven companies surveyed, two companies do not capitalize any internally generated development costs and charged all of them to income as incurred. Five companies capitalize part of internally generated development costs. The percentages of the capitalized amount to the total R&D expenditure range widely between 0.9% and 26%.
- Those companies that charged all internally generated development costs to income as incurred explain that the reasons for not capitalizing were the difficulty in satisfying the criteria for

capitalization set out in IAS38 and uncertainties about the acceptance by the car manufacturers.

- None of the companies surveyed disclosed the scope of the capitalized internally generated development costs.

(ii) **Electrical devices industry (Surveyed companies: 6)**

- All of the six surveyed companies capitalize development costs but, like the automotive parts industry, percentages of capitalization range widely from 3% to 25%.
- The number of the companies that provided disclosures about the scope of capitalized development costs and the start of the amortization period is less than the automotive industry.

(iii) **Pulp and paper industry (surveyed companies: 5)**

- Detail is unclear because disclosures are generally scarce. One company charge all internally generated development costs to income as incurred and another company discloses the capitalization amount. Other three companies state in the "significant accounting policies" that they capitalize internally generated development costs that satisfied certain recognition criteria, however, it is unclear whether any amounts are actually capitalized or what amounts are capitalized.
- One company stated that for projects in which it is difficult to separate the research phase from the development phase, the entire project is treated as the research activity and charged to income immediately.

(iv) **Other industries (surveyed companies: 8)**

- Two companies charged all internally generated development costs to income as incurred and three companies capitalized part of internally generated development costs. Other three companies mention their accounting policies of capitalizing development costs, but it is unclear whether any amounts are actually capitalized or what amounts are capitalized.
- Like the pulp and paper industry, one company stated that for projects in which it is difficult to separate the research phase from the development phase, the entire project is treated as the research activity and charged to income immediately.

Implications from the case study analysis

Tabulated below are the accounting treatments for internally generated development costs applied by the fifty surveyed companies.

A. Companies that charged all internally generated development costs to income as incurred	18
B. Companies that capitalized certain internally generated development costs (with capitalized amounts disclosed)	25
C. Companies that mention the accounting policy of capitalization of internally generated development costs but it is unclear whether any amounts are capitalized or what amounts are capitalized	7

While the number of industries and companies surveyed is limited, all companies are leading companies in their industries, and despite the limited sample size the analysis found a wide divergence in the accounting practice for the internally generated development costs.

Firstly, the pharmaceutical industry, which makes large amounts of investments in research and development, do not capitalize internally generated development costs. This is because the companies in this industry consider that uncertainties in development of new drugs, including whether they can obtain the approval, are very high. It would be conservative and sound judgment but it may result in failure to provide the users of financial statements with important information about the value of invisible assets and to satisfy the objectives of IAS 38. The same observation applies to the chemical industry.

Also in the food and beverage industry, companies do not capitalize internally generated development costs, despite nonexistence of clear-cut milestone like approval for new drugs. Uncertainty about the future economic benefits from the sales of the products is not a circumstance particular to the food industry but would apply equally to many industries. Consequently, the abstract recognition criteria of whether ”it is probable that internally generated development costs will generate future economic benefits” may involve subjectivity of management judgment and thus give rise to the concern that similar circumstances might be accounted for differently. In light of such concern, if an accounting standard similar to IAS 38 would be introduced in Japan, it would be necessary to incorporate more specific guidelines with regard to how management should make estimates and judgments.

IAS 38 requires, for each class of intangible assets, disclosures about applied useful lives, amortization method, carrying values and accumulated amortization at the start and end of the period, increases and decreases in carrying value, amortization amount, and impairment loss, separately for internally generated ones and others (paragraph 118). However, all of these are information about the accounting treatment subsequent to the initial recognition and disclosure is not required about the detail of the asset recognition criteria and the scope of recognition of internally generated development costs. In this regard, we found seven companies that only disclose in their “significant accounting policies” that research expenses are charged to expense in full and development costs are capitalized only if the capitalization criteria are met. For these companies, it cannot be determined from the disclosed information whether no amount is capitalized because no development costs satisfy the recognition criteria, or some amount is capitalized but included in “other intangible assets” because the amount is small.

The result of this analysis suggests that the requirements of IAS 38 concerning internally generated development costs may need some improvements. When an accounting standard similar to IAS38 is introduced in Japan, elaboration would be necessary to ensure adequate implementation and provision of

useful information to users of financial statements.

We are also concerned with the following issues, but have not got clear answers from this case analysis:

- It is unclear whether the divergence observed in the practice of capitalizing or not capitalizing internally generated development costs is a result originally intended by the standard setter.
- Did financial statement preparers undergo difficulty in their judgment about capitalizing internally generated development costs? If so, it is unclear whether the difficulty affected their judgment on an accounting treatment recognize as an asset or not.
- In cases where the companies appear to be cautious in capitalization of development costs, it is unclear which of the managements' intent and auditors' judgment was the decisive factor.

Analysis of Pharmaceutical Industry on capitalization of internally generated development costs

The 2006 and 2007 financial statements of the following companies were reviewed in this analysis of the pharmaceutical industry:
ASTRAZENECA
GLAXOSMITHKLINE
MERCK
NOVARTIS
ROCHE
SANOFI-AVENTIS

Except for one company, the companies expensed all research and development costs prior to regulatory approval.

The companies disclosed their accounting policies on internal development costs as follows:

- Internal development expenditure is capitalized only if it meets the recognition criteria of IAS 38 'Intangible assets'. Where regulatory and other uncertainties are such that the criteria are not met the expenditure is recognized in the income statement. This is invariably the case prior to approval of the drug by the relevant regulatory authority. Where, however the recognition criteria are met, intangible assets are capitalized and amortized on a straight-line basis over their useful economic lives from product launch. As at 31 December 2007, no amounts have met the recognition criteria. **【ASTRAZENECA】**
- Any development costs incurred by the Group and associated with acquired licenses, patents, know-how or marketing rights are written off to the income statement when incurred, unless the criteria for recognition of an internally generated intangible asset are met, usually when a regulatory filing has been made in a major market and approval is considered highly probable. **【GLAXOSMITHKLINE】**
  (The amount of capitalized development cost is not disclosed.)
- The costs of research and development are expensed in full in the period in which they are incurred. Development expenses in the Pharmaceuticals business sector cannot be capitalized since the high level of risk up to the time that pharmaceutical products are marketed means that the requirements of IAS 38 are not satisfied in full. Costs incurred after regulatory approval are insignificant. In the same way,

the risks involved until products are marketed means that development expenses in the Chemicals business sector cannot be capitalized. **【MERCK】**

- Internal R&D expenses and also payments made to clinical research organizations for contracted research are fully charged to the income statement. The Group considers that regulatory and other uncertainties inherent in the development of new products preclude the capitalization of these development costs. **【NOVARTIS】**
- Internal development costs are capitalized as intangible assets only when there is an identifiable asset that can be completed and that will generate probable future economic benefits and when the cost of such an asset can be measured reliably. The Group does not currently have any such internal development costs that qualify for capitalization as intangible assets. Internal development costs are therefore charged against income as incurred since the criteria for their recognition as an asset are not met. **【ROCHE】**
- Internally generated pharmaceutical development costs are also expensed as incurred: they are not capitalized, because the criteria for capitalization are considered not have been met until marketing approval for the related product has been obtained from the regulatory authorities. **【SANOFI-AVENTIS】**

Analysis of Food & Beverage industry on capitalization of internally generated development costs

The 2006 and 2007 financial statements of the following companies were reviewed in this analysis of the Food & Beverage industry:
CADBURY SCHWEPPES
DANISCO
DANONE
NESTLE
ORKLA
PERNOD　RICARD
UNILEVER

Except for one company, the companies expensed research and development costs incurred prior to product launch into the market.

The companies disclosed their accounting policies on internal development costs as follows:

- Development expenditure is assessed and capitalized if it meets all of the following criteria:
  - An asset is created that can be identified;
  - It is probable that the asset created will generate future economic benefits; and
  - The development cost of the asset can be measured reliably.

  Capitalized development costs are amortized over their expected economic lives. Where no internally generated intangible asset can be recognized, development expenditure is recognized as an expense in the financial year in which it is incurred. 【CADBURY SCHWEPPES】
- Clearly defined and identifiable development projects in which the technical degree of exploitation, adequate resources and potential market or development possibility in the enterprise are recognizable, and where it is the intension to produce, market or use the project, are recognized in intangibles where a correlation exists between the costs incurred and future earnings. Lack of regulatory approval, customer approvals and other uncertainties often imply that the requirements for recognition in the balance sheet have not been met and that development expenses are consequently expensed when incurred. 【DANISCO】
- Development costs are only recorded under assets in the balance sheet if all the recognition criteria set by IAS38 are met before the products are launched on the market. Research and development costs are generally expensed as incurred due to the very short time between the date on which technical feasibility is demonstrated and the date on which the products are marketed. 【DANONE】
- Development costs relating to new products are not capitalized because the expected future economic benefits cannot be reliably determined. As long as the products have not reached the market place, there is no reliable evidence that positive future cash flows would be obtained. 【NESTLE】
- Expenditure on development will be recognized in the balance sheet if the expenses are identifiable and represent future economic benefits of which the Group has control. Expenditure related to internally generated trademarks, etc.(marketing) is expensed directly since the future economic benefits to the company cannot be identified and shown to be probable with any degree of certainty at the time the trademark is launched. 【ORKLA】
- In the context of the Group's activities, and in accordance with IAS38(intangible assets), research and development costs are recognized in expenses in the financial year they are incurred, except for certain development costs which meet the capitalization criteria prescribed by the standard. Application of this policy did not

lead the Group to capitalize a significant amount of development costs in the financial years ended 30 June 2007 and 30 June 2006. **【PERNOD RICARD】**

- Unilever monitors the level of product development costs against all the criteria set out in IAS38. These include the requirement to establish that a flow of economic benefits is probable before costs are capitalized. For Unilever the is evident only shortly before a product is launched into the market. The level of costs incurred after these criteria have been met is currently insignificant. **【UNILEVER】**

The capitalization ratio of ORKLA is set out in the table below.

Company	Total R&D Cost		Capitalized Development cost		Capitalization Ratio	
	2007	2006	2007	2006	2007	2006
ORKLA	58.6	58.5	6.2	9.6	10.58%	16.41%

(in Million Euros)

Analysis of Chemicals industry on capitalization of internally generated development costs

The 2006 and 2007 financial statements of the following companies were reviewed in this analysis of the Chemicals industry:

BASF

BAYER

HENKEL

PERSTOP

SYNGENTA

The companies disclosed their accounting policies on internal development costs as follows:

- Internally generated intangible assets are primarily comprised of internally developed software. Such software, as well as other internally generated assets for internal use, are valued at cost and amortized over their useful lives. Development costs also include, in addition to those costs directly attributable to the development of the asset, an appropriate allocation of overhead cost. The amortization period of internally generated intangible assets are 3 to5 years. **【BASF】**
- According to IAS38 Intangible Assets), development costs must be capitalized if, and only if, specific, narrowly defined conditions are fulfilled. Development costs

must be capitalized if it is sufficiently certain that the future economic benefits to the company will also cover the respective development costs. Since development projects are often subject to regulatory approval procedures and other uncertainties, the conditions for the capitalization of costs incurred before receipt of approvals are not normally satisfied. **【BAYER】**

- Development costs are recognized as an asset if all the criteria for recognition are met, the research phase can be clearly distinguished from the development phase and the expenditure can be attributed to distinct individual project phases. Currently, the criteria set out in IAS38 for recognizing development costs are not all being met, due to a high level of interdependence within the development projects and the uncertainty as to which products will eventually be marketable. **【HENKEL】**
- Expenses relating to the development of new products/processes are capitalized as intangible assets if they fulfill the following criteria: the expenses must be identifiable and it must be highly probable that the asset will generate future financial benefits for the Group. Costs that have previously been expensed may not subsequently be reported as assets. The amortization of capitalized development costs starts when the product starts to be produced commercially or the process starts to be used for commercial production. The amortization period must not exceed five years. **【PERSTOP】**
- Research and development expenses are charged to the income statement when incurred. Syngenta considers that the regulatory and other uncertainties inherent in the development of its key new products preclude it from capitalizing development costs. **【SYNGENTA】**

The capitalization ratio of BASF, BAYER, and PERSTOP is set out in the table below.

Company	Total R&D Cost		Capitalized Development cost		Capitalization Ratio	
	2007	2006	2007	2006	2007	2006
BASF	1,400	1,302	19.7	24.7	1.43%	1.93%
BAYER	2,639	2,402	61	105	2,37%	4,57%
PERSTOP	10.3	9.7	0.1	0.3	0.97%	0.31%

(in Million Euros)

Analysis of Automotive manufacturers on capitalization of internally generated development costs

The 2006 and 2007 financial statements of the following companies were reviewed in this analysis of the automotive manufacturers:
BMW
DAIMLER
FIAT
PSA PEUGEOT CITROEN
RENAULT
VOLKSWAGEN

All six companies capitalized internal development costs. The companies disclosed their accounting policies on internal development costs as follows:

- Development costs for vehicle and engine projects are capitalized at manufacturing cost, to the extent that costs can be allocated reliably and both technical feasibility and successful marketing are assured. It must also be probable that the development expenditure will generate future economic benefits. Capitalized development costs comprise all expenditure that can be attributed directly to the development process, including development-related-overheads. Capitalized development costs are amortized on a systematic basis, following the commencement of production, over the estimated product life which is generally seven years. **【BMW】**
- Development costs are recognized if the conditions for capitalization according to IAS38 are met. Capitalized development costs include all direct costs and allocable overhead and are amortized over the expected product life cycle (2 to 10 years). **【DAIMLER】**
- Development costs for vehicle project production are recognized as an asset if and only if both of the following conditions are met: that development costs can be measured reliably and that technical feasibility of the product, volumes and pricing support the view that the development expenditure will generate future economic benefits. Capitalized development costs include all direct and indirect costs that could be directly attributable to the development process. Capitalized development costs are amortized on a systematic basis from the start of production of the related product over the product's estimated life. **【FIAT】**

- Development expenditure on vehicles and mechanical parts incurred between the product launch (corresponding to the styling decision for vehicles) and the start-up of pre-series production is recognized in intangible assets. It is amortized from the start-of-production date over their useful lives: up to a maximum of seven years for vehicles and a period of ten years for mechanical parts. The capitalized amount includes payroll costs of personnel directly assigned to the project, the cost of prototypes and the cost of external services related to the project. These costs do not include any overhead or indirect expense, such as rent, building depreciation and information system utilization costs. **【PEUGEOT】**
- Development expenses incurred between the approval of the decision to begin development and implement production facilities for a new vehicle or part and the subsequent approval of the design for mass production are capitalized as intangible assets. They are amortized on a straight-line basis from the date of approval for production, over the expected market life of the vehicle or part, up to a maximum period of seven years. Capitalized development expenses mainly comprise the cost of prototypes, the cost of studies invoiced by external firms, and a share of overheads dedicated exclusively to development activities. Expenses incurred before the formal approval of product development are recorded as costs in the period they are incurred, in the same way as research expenses. Expenses incurred after the start of mass production are treated as production costs. **【RENAULT】**
- Development costs for future series products and other internally generated intangible assets are capitalized at cost, provided manufacture of the products is likely to bring the Volkswagen Group an economic benefit. If the criteria for recognition as assets are not met, the expenses are recognized in the income statement in the year in which they are incurred. Capitalized development costs include all direct and indirect costs that are directly attributable to the development process. The cost are amortized using the straight-line method from the start of production over the expected life cycle of the models developed-generally between five and ten years. **【VOLKSWAGEN】**

The capitalization ratio of the six companies is set out in the table below.

Company	Total R&D Cost		Capitalized Development cost		Capitalization Ratio	
	2007	2006	2007	2006	2007	2006
BMW	3,144	3,208	1,333	1,536	42.39%	47.88%
DAIMLER	3,534	3,135	1,088	1,006	30.79%	32.09%

FIAT	1,741	1,558	932	813	53.53%	50.88%
PEUGEOT	2,074	2,195	754	882	36.35%	40.18%
RENAULT	2,462	2,400	1,287	1,091	52.27%	45.46%
VW	4,923	4,240	1,446	1,478	29.37%	34.86%

(in Million Euros)

Analysis of Auto parts manufacturers on capitalization of internally generated development costs

The 2006 and 2007 financial statements of the following companies were reviewed in this analysis of the Auto parts manufacturers:

AUTOLIV
BOSCH
CONTINENTAL
FAURECIA
MAN
MICHELIN
VALEO

The companies that capitalized internal development costs disclosed their accounting policies on internal development costs as follows:

- Internally generated intangible assets are capitalized pursuant to IAS38 if a future economic benefit will flow to the entity from the use of the asset and the cost of the asset can be reliably determined. These assets are generally carried at cost and amortized using the straight-line method over their economic useful life. As a rule, the useful life is four years. **【BOSCH】**
- If the related activity fulfills the recognition criteria for internally generated intangible assets set out in IAS38, this portion of the expenses is recognized as an intangible asset and is amortized over a period of three years from the date that the developed products become marketable. Only very few development projects fulfill the strict recognition criteria as intangible assets since our major medium-and longer-term projects are for supplying automobile manufacturers. New developments for the original equipment business are not marketable until Continental has been nominated as the supplier for the particular vehicle platform

or model and, furthermore, has successfully fulfilled pre-production release stages. Accordingly, development costs are recognized as an asset only as of the date of nomination as supplier and fulfillment of a specific pre-production release stage. The development is considered to be completed once the final approval for the unlimited series production is granted. **【CONTINENTAL】**

- In accordance with IAS38, development costs are recorded as an intangible asset where the Company concerned can demonstrate:
  - its intension to complete the project as well as availability of adequate technical, financial and other resources to complete the development;
  - how the customer contract will generate probable future economic benefits and the Company's ability to measure these reliably;
  - its ability to measure reliably the expenditure attributable to the contracts concerned (costs to completion)

  These capitalized costs are amortized to match the quantities of parts delivered to the customer, over a period not to exceed five years except under exceptional circumstances. **【FAURECIA】**
- Expenses incurred for developing new products or series are capitalized (ⅰ) when new products or series are found technically and economically feasible, (ⅱ) when they have been scheduled for internal use or marketing, (ⅲ) if the expenses can be reliably determined, and (ⅳ) if sufficient resources are available for development Development expenditures are not capitalized unless future cash inflows are highly probable to recover them. Capitalized development costs are amortized as from the date of market rollout. Amortization is charged on a straight line basis, as a rule over five to seven years(ten years within Diesel Engines). **【MAN】**
- Development expenditure is capitalized where the Group can demonstrate:
  - that it has the intention, and the technical and financial resources to complete the development;
  - that the intangible asset will generate future economic benefits; and
  - that the cost of the intangible asset can be measured reliably.

  These projects are analyzed on a case-by case basis to ensure they meet the criteria for capitalization as described above. Capitalized development costs are amortized over a maximum period of four years from the start of volume production. **【VALEO】**

The companies that fully expensed internal development costs as incurred disclosed their accounting policies on internal development costs as follows:

- Research and development and most engineering expenses are expensed as incurred. Certain engineering expenses related to long term supply arrangements are capitalized when the defined criteria, such as the existence of a contractual guarantee for reimbursement, are met. The aggregate amount of such assets is not significant in any period presented. **【AUTOLIV】**
- In 2007 and 2006, no development costs were capitalized since the criteria of recognition as intangible assets are not met. To be recognized as an asset, the development costs incurred within the context of a new product or a significant product renewal project must fulfill six recognition criteria. One of these criteria requires the entity to demonstrate the existence of a market for the output of the intangible asset. The existence of the market is demonstrated only when the Group has obtained the manufacturer approval and when the level of profitability generated from the business plan proposed by the manufacturers is in line with Group objectives. In practice, the corresponding development costs are incurred at a stage of the project which is prior to the manufacturer approval. **【MICHELIN】**

- The capitalization ratio of BOSCH, CONTINENTAL, FAURECIA, MAN and VALEO is set out in the table below.

Company	Total R&D Cost		Capitalized Development cost		Capitalization Ratio	
	2007	2006	2007	2006	2007	2006
BOSCH	3,532	3,376	118	209	3.34%	6.19%
CONTINENTAL	841	678	7.3	0.8	0.87%	0.12%
FAURECIA	613	630	159	208	25.97%	33.03%
MAN	358	362	43	83	12.01%	22.92%
VALEO	790	789	122	128	15.44%	16.22%

(in Million Euros)

Analysis of Electric Devices industry on capitalization of internally generated development costs

The 2006 and 2007 financial statements of the following companies were reviewed in this analysis of the Electric devices industry:

ALCATEL

ELECTROLUX

ERICSSON

NOKIA

PHILLIPS
SIEMENS

All six companies capitalized internal development costs. The companies disclosed their accounting policies on internal development costs as follows:

- The criteria for capitalizing development costs are set out in note 1f. Once capitalized, these costs are amortized over the estimated useful lives of the products concerned (3 to 10 years). The Group must therefore evaluate the commercial and technical feasibility of these development projects and estimate the useful lives of the products resulting from the projects. **【ALCATEL】**
- Electrolux capitalizes expenses for certain own development of new products provided that the level of certainty of their future economic benefits and useful life is high. The intangible asset is only recognized if the product is sellable on existing markets and that resources exist to complete the development. Only expenditures, which are directly attributable to the new product's development, are recognized. Capitalized development costs are amortized over their useful lives, between 3 and 5 years, using straight-line method. **【ELECTROLUX】**
- Development costs that meet IFRS' intangible assets recognition criteria for products that will be sold, leased or otherwise marketed as well as those intended for internal use are capitalized. The starting point for capitalization is based upon management's judgment technological and economical feasibility is confirmed, usually when a product development project has reached a defined milestone according to an established project management model. Capitalization ceases and amortization of capitalized development costs begins when the product is available for general release. The definition of amortization periods as well as the evaluation of impairment indicators require management's judgment. **【ERICSSON】**
- We capitalize certain development costs when it is probable that a development project will be a success and certain criteria, including commercial and technical feasibility, have been met. These costs are then amortized on a systematic basis over their expected useful lives, which due to the constant development of new technologies is between two to five years. During the development stage, management must estimate the commercial and technical feasibility of these projects as well as their expected useful lives. **【NOKIA】**
- Costs for development activities, whereby research findings are applied to a plan or design for the production of new or substantially improved products and processes,

are capitalized if development costs can be measured reliably, the product or process is technically and commercially feasible, future economic benefits are probable and Siemens intends, and has sufficient resources, to complete development and to use or sell the asset. The costs capitalized include the cost of materials, direct labor and directly attributable general overhead expenditure that serves to prepare the asset for use. An amortization period is generally three to five years.【SIEMENS】

- 【PHILLIPS】prepares its financial statements in accordance with U.S.GAAP. The amount of capitalized development cost is disclosed in reconciliation table between IFRS and U.S.GAAP

The capitalization ratio of the six companies is set out in the table below.

Company	Total R&D Cost		Capitalized Development cost		Capitalization Ratio	
	2007	2006	2007	2006	2007	2006
ALCATEL	3,107	1,579	153	109	4.92%	6.90%
ELECTRO LUX	215	195	55.3	46.7	25.72%	23.95%
ERICSSON	3,462	3,461	394	532	11.38%	15.37%
NOKIA	5,804	4,024	157	127	2.71%	3.16%
PHILLIPS	1,863	1,930	234	271	12.56%	14.04%
SIEMENS	3,795	3,738	396	647	10.43%	17.31%

(in Million Euros)

Analysis of Pulp&Paper industry on capitalization of internally generated development costs

The 2006 and 2007 financial statements of the following companies were reviewed in this analysis of the Pulp & Paper industry:

FORTUM

M-REAL

SCA

STRAENSO

UPM

The companies disclosed their accounting policies on internal development costs as follows:

- Research and development costs are recognized as expense as incurred and included in other expenses in the income statement. If development costs will generate future income, they are capitalized as intangible assets and depreciated over the period of the income streams.【FORTUM】
- Research and development expenditure is recognized as an expense at the time it is incurred. Development expenditure is capitalized if it meets the criteria for capitalization. To date, M-real does not have capitalized R&D expenditure. 【M-REAL】
- Research expenditure is recognized as an expense as incurred. In cases where it is difficult to separate the research phase from the development phase in a project, the entire project is treated as research and expensed immediately. Identifiable expenditure for development of new products and processes is capitalized to the extent it is expected to provide future economic benefits. In other cases, development costs are expensed as incurred. Capitalized expenditure is depreciated in a straight line from the date when the asset can start to be used or produced commercially and during the estimated useful life of the asset. The depreciation period is 5-10 years.【SCA】
- Research costs are expensed as incurred in Other Operating Expenses in the Consolidated Income Statement. Development costs are also expensed as incurred unless it is assured that they will generate future income, in which case they are capitalized as intangible assets and depreciated over the period of the income streams.【STRAENSO】
- Research and development costs are expensed as incurred, except for certain development costs, which are capitalized when it is probable that a development project will generate future economic benefits, and the cost can be measured reliably. Capitalized development costs are amortized on a systematic basis over their expected useful future lives, usually not exceeding five years.【UPM】

The capitalization ratio of SCA is set out in the table below.

Company	Total R&D Cost		Capitalized Development cost		Capitalization Ratio	
	2007	2006	2007	2006	2007	2006
SCA	63	60	5.0	5.0	7.73%	8.36%

(in Million Euros)

Analysis of other industry on capitalization of internally generated development costs

The 2006 and 2007 financial statements of the following companies were reviewed in this analysis of the other industry:

BENETTON
DEUTCHE TELEKOM
EADS
L'OREAL
LVMH (LOUIS VITTON)
THYSSEN KRUPP
TESCO
VIVENDI

The companies disclosed their accounting policies on internal development costs as follows:

- The cost of an internally generated intangible asset includes only those expenses which can be directly attributed or allocated to it as from the date on which it satisfies the criteria for recognition as an asset. **【BENETTON】**
- Development expenditures are capitalized if they meet the criteria for recognition as assets and are amortized over their useful lives. **【DEUTCHE TELEKOM】**
- Costs for self-initiated research and development activities are assessed whether they qualify for recognition as internally generated intangible assets. Apart from complying with the general requirements for and initial measurement of an intangible asset, qualification criteria are met only when technical as well as commercial feasibility can be demonstrated and cost can be measured reliably. It must also be probable that the intangible asset will generate future economic benefits and that it is clearly identifiable and allocable to a specific product. Further to meeting these criteria, only such costs that relate solely to the development phase of a self-initiated project are capitalized. Any costs that are classified as part of the research phase of a self-initiated project are expensed as incurred. If the research phase cannot be clearly distinguished from the development phase, the respective project related costs are treated as if they were incurred in the research phase only. Capitalized development costs are generally amortized over the estimated number of units produced. In case the number of units produced cannot be estimated reliably capitalized development cost are amortized over the estimated useful life of the internally generated intangible asset.

Amortization of capitalized development costs is recognized in cost of sales.【EADS】

- The expenses incurred during the development phase are recognized as intangible assets only if they meet all the following criteria , in accordance with standard IAS38:
  - the project is clearly defined and the related costs are separately identified and reliably measured,
  - the technical feasibility of the project has been demonstrated,
  - the intention and ability to complete the project and to use or sell the products resulting from the project have been demonstrated,
  - the resources necessary to complete the project and to use or sell it are available,
  - the group can demonstrate that the project will generate probable future economic advantages, as the existence of a potential market for the production resulting from the project, or its internal usefulness has been demonstrated.

  In view of the very large number of development projects and the uncertainties concerning the decision to launch the products relating to the project, L'Oreal considers that some of these capitalization criteria are not met.【L'OREAL】
- No product development expenditure is not capitalized unless the final decision to launch the product has been taken.【LVMH】
- Development expenditure incurred on an individual project is carried forward only if all the criteria set out in IAS38 are met, namely:
  - An asset is created that can be identified (such as software or new processes)
  - It is probable that the asset created will generate future economic benefits; and
  - The development cost of the asset can be measured reliably.

  Following the initial recognition of development expenditure, the cost is amortized over the project's estimated useful life, usually at 14-25% of cost per annum.【TESCO】
- Development costs are capitalized if the product or process is technically and commercially feasible, there is a market for the output of the intangible asset, the attributable expenditure can be measured reliably, and the Group has sufficient resources to complete development. Costs include direct costs of material, direct labor, and allocable material and manufacturing overhead. Administrative costs are capitalized only if such costs are directly related to production【THYSSEN KRUPP】
- Development expenses are capitalized when the feasibility and profitability of the project can reasonably be considered certain.【VIVENDI】

The capitalization ratio of EADS and THYSSEN is set out in the table below.

Company	Total R&D Cost		Capitalized Development cost		Capitalization Ratio	
	2007	2006	2007	2006	2007	2006
EADS	3,508	3,331	900	873	25.66%	26.21%
THYSSEN	264	242	65	54	24.62%	22.31%

APPENDIX: Capitalization of internally generated development costs

Company	Capitalize or not	Capitalization Ratio (in 2007)	Scope of capitalized internally generated development costs	Capitalization period and Beginning of amortization	Amortization period
Pharmaceutical Industry					
ASTRAZENECA	No	N/A	N/A	N/A	N/A
GLAXO SMITHKLINE	Not disclosed	Not disclosed	Not disclosed	Not disclosed	Not disclosed
MERCK	No	N/A	N/A	N/A	N/A
NOVARTIS	No	N/A	N/A	N/A	N/A
ROCHE	No	N/A	N/A	N/A	N/A
SANOFI-AVENTIS	No	N/A	N/A	N/A	N/A
Food and Beverage Industry					
CADBURY SCHWEPPES	No	N/A	N/A	N/A	N/A
DANISCO	No	N/A	N/A	N/A	N/A
DANONE	No	N/A	N/A	N/A	N/A
NESTLE	No	N/A	N/A	N/A	N/A
ORKLA	Yes	10.58%	Not disclosed	Not disclosed	Estimated useful life
PERNOT RICARD	No	N/A	N/A	N/A	N/A
UNILEVER	No	N/A	N/A	N/A	N/A
Chemical Industry					
BASF	Yes	1.43%	Costs directly attributable to the development of the asset, an appropriate allocation of overhead cost	Not disclosed	3 to 5 years
BAYER	Yes	2.37%	Not disclosed	Not disclosed	Not disclosed
HENKEL	No	N/A	N/A	N/A	N/A
PERSTOP	Yes	0.97%	Not disclosed	When the product starts to be produced commercially or the process starts to be used for commercial production.	Not to exceed 5 years

SYNGENTA	No	N/A	N/A	N/A	N/A
Automotive(finished vehicles) Industry					
BMW	Yes	42.39%	All expenditure that can be attributed directly to the development process Development related overheads included.	From the commencement of production.	Estimated product life (generally 7 years)
DAIMLER	Yes	30.79%	All direct costs and allocable overhead	Not disclosed	Expected product life cycle (2 to 10 years).
FIAT	Yes	53.53%	All direct and indirect costs that could be directly attributable to the development process	From the start of production of the related product.	Product's estimated life (3 to 10 years)
PEUGEOT	Yes	36.35%	Payroll costs of personnel directly assigned to the project, cost of prototypes, and the cost of external services related to the project. Not include any overhead or indirect expense, such as rent, building depreciation, system utilization costs.	Development expenditure incurred between the project launch and the start-up of pre-series production is recognized as intangible assets. It is amortized from the start-of-production date.	Product's useful lives Vehicles: Maximum of 7years Mechanical parts: Maximum of 10 years
RENAULT	Yes	52.27%	Cost of prototypes, the cost of studies invoiced by external firms, and a share of overheads dedicated exclusively to development activities.	Development expenses incurred between the approval of the decision to begin development and subsequent approval of the design for mass production are capitalized. They are amortized from the date of approval for production.	Expected market life of the product. Up to a maximum period of 7 years.
VOLKSWAGEN	Yes	29.37%	All direct and indirect	From the start of	Expected life

			costs that are directly attributable to the development process.	production.	cycle of the models. (Generally 5 to 10 years)
Automotive Parts Industry					
AUTOLIV	No	N/A	N/A	N/A	N/A
BOSCH	Yes	3.34%	Not disclosed	Not disclosed	4 years
CONTINENTAL	Yes	0.87%	Not disclosed	From the date that the developed products become marketable	3 years
FAURECIA	Yes	25.97%	Not disclosed	Not disclosed	Not to exceed 5 years
MAN	Yes	12.01%	Not disclosed	From the date of market rollout	5 to 7 years
MICHELIN	No	N/A	N/A	N/A	N/A
VALEO	Yes	15.44%	Not disclosed	From the start of volume production	Maximum period of 4 years
Electrical Devices Industry					
ALCATEL	Yes	4.92%	Not disclosed	Not disclosed	3 to 10 years
ELECTROLUX	Yes	25.72%	Directly attributable to the new product's development	Not disclosed	3 to 5 years (useful lives)
ERICSSON	Yes	11.38%	Not disclosed	Based upon management's judgment. Usually when a product development project has reached a defined milestone according to an established project management model.	Not disclosed
NOKIA	Yes	2.71%	Not disclosed	Not disclosed	Expected useful lives (2 to 5 years)
PHILLIPS	Yes	12.56%	Not disclosed	Not disclosed	Not disclosed
SIEMENS	Yes	10.43%	Cost of materials, direct labor, directly attributable	Not disclosed	Generally 3 to 5 years

			general overhead expenditure		
Pulp and Paper Industry					
FORTUM	Not disclosed	Not disclosed	Not disclosed	Not disclosed	Not disclosed
M-REAL	No	N/A	N/A	N/A	N/A
SCA	Yes	7.94%	Not disclosed	From the date when the asset can start to be used or produced commercially.	5 to 10 years (estimated useful life of the asset)
STORAENSO	Not disclosed	Not disclosed	Not disclosed	Not disclosed	Not disclosed
UPM	Not disclosed	Not disclosed	Not disclosed	Not disclosed	Not exceeding 5 years (expected useful future lives)
Other Industry					
BENETTON	Not disclosed	Not disclosed	Not disclosed	Not disclosed	Not disclosed
DEUTCHE TELEKOM	Not disclosed	Not disclosed	Not disclosed	Not disclosed	Not disclosed
EADS	Yes	25.66%	Not disclosed	Costs incurred during the development phase are capitalized.	Over the estimated number of units produced
L'OREAL	No	N/A	N/A	N/A	N/A
LOUIS VITTON	No	N/A	N/A	N/A	N/A
THYSSENKRUPP	Yes	24.62%	direct costs of material, labor, allocable manufacturing overhead cost	Not disclosed	Not disclosed
TESCO	Yes	Not disclosed	Not disclosed	Not disclosed	4 to 7 years
VIVENDI	Not disclosed	Not disclosed	Not disclosed	Not disclosed	Not disclosed