Core Intangible Assets Reports: Concept and Design







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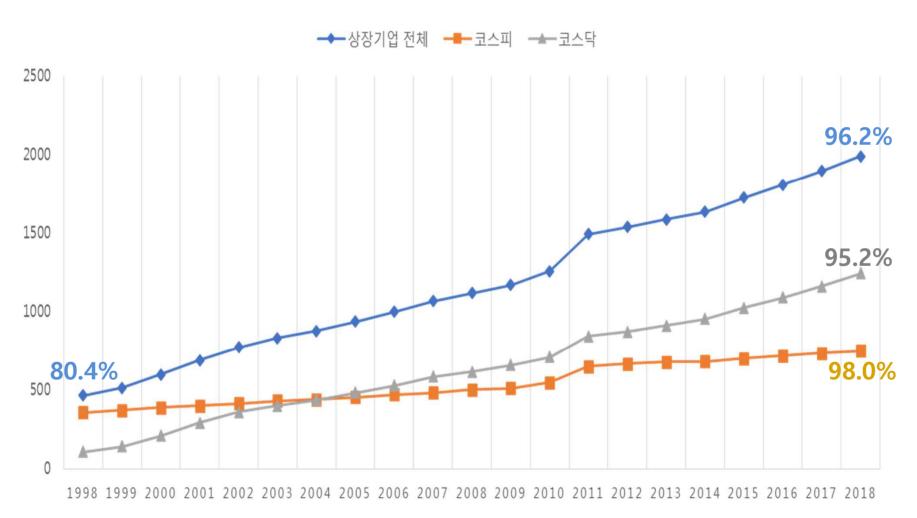
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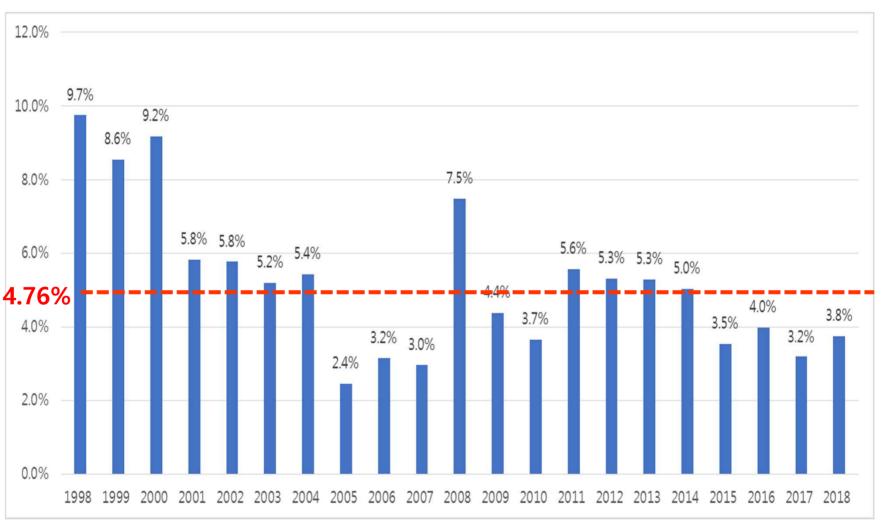
I -1. Current reporting status of Intangible Assets

¶ Number of companies reporting Intangible Assets



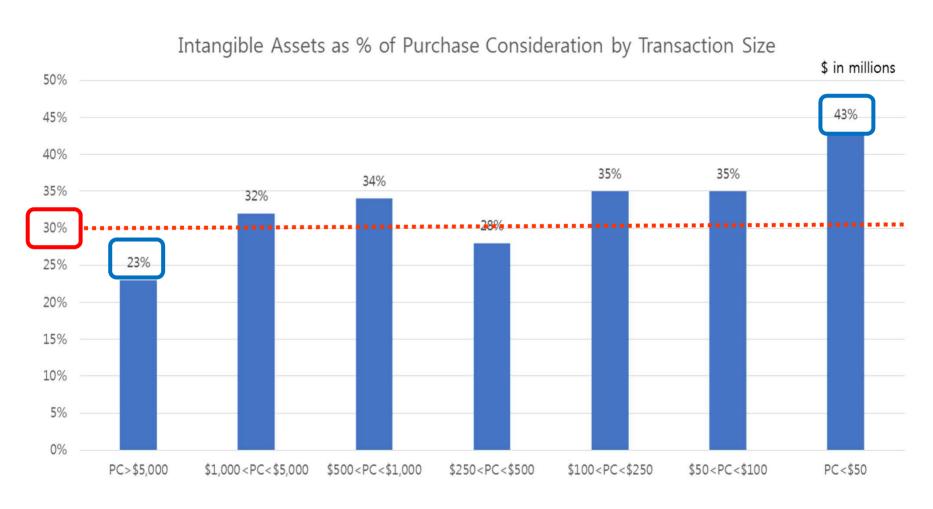
I-1. Current reporting status of Intangible Assets

I Intangible Assets to market capitalization ratio



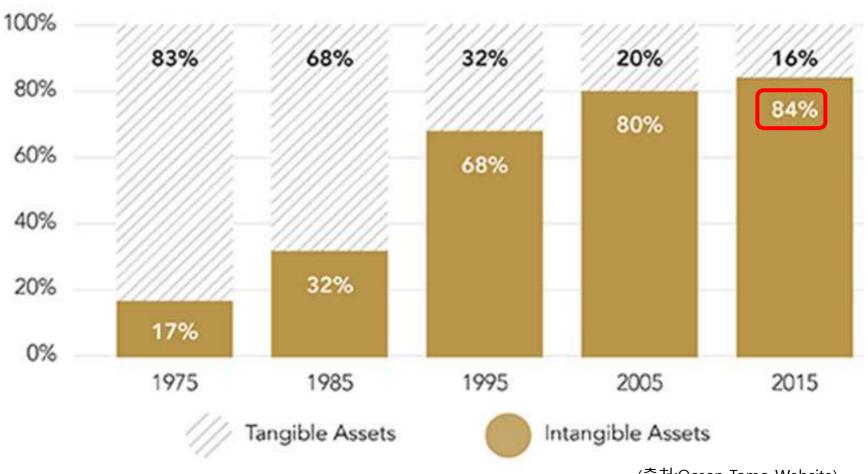
I-1. Current reporting status of Intangible Assets

I Intangible Assets to M&A PC ratio



I -1. Current reporting status of Intangible Assets

Intangible Assets to S&P 500 Market Value ratio



I-1. Current reporting status of Intangible Assets

¶ Ohlson(1995)

$$P_t = \mathbf{b}\mathbf{v}_t + \alpha_1 x_t^a + \alpha_2 v_t$$
 (Ohlson, 1995)

Pt: market value of the company

 bv_t : capital invested in the company

xt: abnormal results

vt: other than the financial information

$$P_t - \text{bv}_t = \sum_{\tau=1}^{\infty} R_f^{-\tau} (x_{t+\tau}^a)$$

Ohlson (1995) admits the existence of goodwill, which defines as the flow of abnormal results that the company expects to receive, and which are derived from trademarks, patents, location, customer loyalty, investment in R&D, advertising and specificity of the organizational model—intangible assets, which are potential sources of value creation.

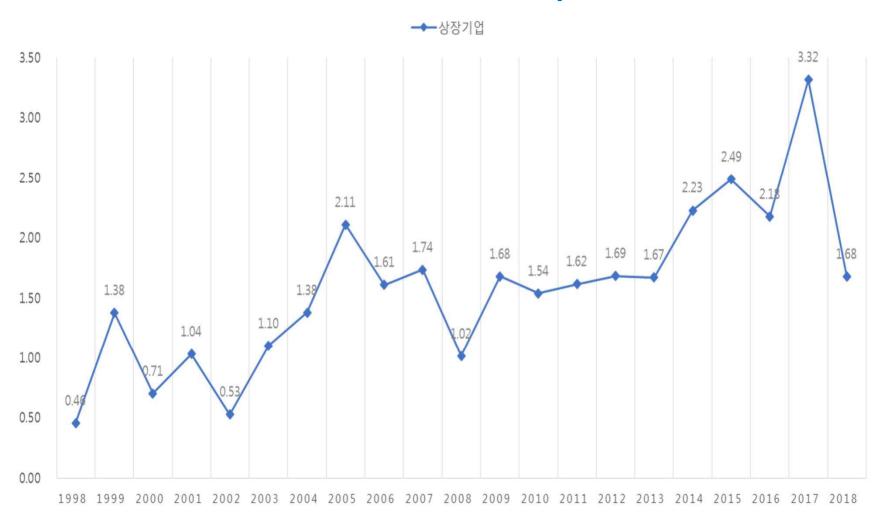
I -1. Current reporting status of Intangible Assets

¶ Market-to-Book Ratio

- Market-to-book ratios (the ratio of market capitalisation to the carrying amount of net assets of an entity) are sometimes invoked as a measure of the significance of unrecognised intangible assets.
- In addition, the upward trend in mean market-to-book ratios is sometimes used as evidence of the 'new economy', characterised by the arrival of a new breed of more valuable unrecognised intangible assets. (Lev, B. 2001; Beattie, V. and Thomson, S.J. 2005)
 - ✓ <u>Intangible assets becoming an increasingly significant driver of corporate value</u>;
 - ✓ <u>Investors becoming increasingly aware of the role that intangible</u> <u>assets play with respect to corporate value</u>.

I-1. Current reporting status of Intangible Assets

¶ Market-to-Book Ratio of Listed Companies



I-1. Current reporting status of Intangible Assets

¶ Market-to-Book Ratio per Market type (KOSPI/KOSDAQ)



<u>I -1.</u> Current reporting status of Intangible Assets

¶ Market-to-Book Ratio of Top 10 stocks by market capitalization (Kospi)

(As of the end of 2018)

Company name	Market Cap(1million KRW)	Market to Book Ratio
Samsung Electronics	262,876,300	0.03
SK Hynix	41,382,109	1.04
Celltrion	27,724,070	16.17
Samsung Biologics	25,572,773	6.18
Hyundai Motor	24,214,125	0.71
LG Chem	23,922,154	1.86
Korea Electric Power	21,249,011	0.39
POSCO	19,440,275	0.48
SK Telecom	19,368,919	1.99
Shinhan Financial Group	18,637,777	0.90

I -1. Current reporting status of Intangible Assets

¶ Market-to-Book Ratio of Top 10 stocks by market capitalization (KOSDAQ)

(As of the end of 2018)

Company name	Market Cap(1million KRW)	Market to Book Ratio
Celltrion HealthCare	10,478,657	6.31
SillaJen	5,131,552	22.63
Helixmith	4,052,890	61.58
CJ E&M	3,963,507	0.67
HLB	3,122,063	15.92
Medy-Tox	3,053,779	15.13
Studio Dragon	2,591,958	10.03
PearlAbyss	2,500,312	6.44
Celltrion Pharm	2,161,702	9.12
Genexine	1,644,167	4.98

X Lev (2001) "Lack of information and unrecognized Intangible Assets incur social problems and damages, such as excessive capital expense on knowledge-intensive companies in infancy stage and devaluation of Intangible Asset intensive companies"

I-1. Current reporting status of Intangible Assets

¶ Focus Group Interview (1)

"Many are voicing concerns of the limitation of financial statements. Intangible Assets play a key role in creating a value for a company, however it is not being recognized properly"

"The current financial statement is analyzing 2018 company with 1900s view point. Intangible Assets, such as technology, business model, brand, network, IP, subscribers account are taking a big part in company's value. However, financial statements are recorded with tangible asset, such as land, equipment and machinery."

"As financial statements fail to keep up with the company's rapid change, it is not delivering useful information to investors."

I -1. Current reporting status of Intangible Assets

¶ Focus Group Interview(2)

"Analysts from Internet games, entertainment and bio sectors even say FS is useless. I/S reflected on FS is mostly goodwill and it is not a critical factor when evaluating a company's value. However, factors that can estimate future profit such as, license, IP, subscriber accounts are not included and it leaves FS impractical."

"If Intangible Assets are hard to evaluate objectively, experts have an obligation to deliver details through footnotes or disclosure"

1 The Purpose of the Study

- The purpose of the study is to present a new concept and reporting method of Intangible Assets in order to overcome the limitation, which Intangible Assets are not faithfully reported in financial information based on current accounting practices.
- Specifically, the Study intends to define Core Intangible Assets, which is core
 driver of corporate value and set an evaluating and reporting method
 - * The UK's FRC and Australian Accounting Standards Board(AASB) have came up with alternatives and the Study is proposing another option
- As we are including value driver, which has been reported as non-financial information to financial reporting as core Intangible Assets, flexible use of financial information(externally) and evaluating management's accountability are expected.

I -2. Current reporting limitations of Intangible Assets

¶ Consistency of "Enact" and "application" in accounting principles

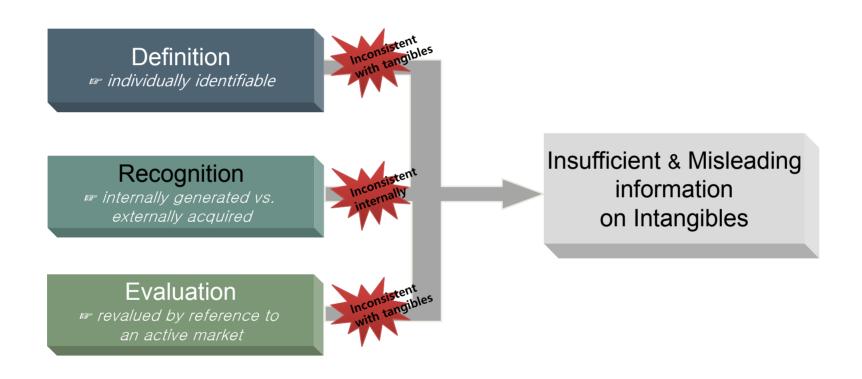
• Consistency Principle: Financial accounting's theoretical framework (e.g.

The conceptual Framework for Financial Reporting) was enacted to establish Generally Accepted Accounting Principles (GAAP) in consistent manner (refer to: QC22)

• Three Inconsistency in financial reporting of Intangible Assets

- ✓ Intangible Assets 「Definition」 Inconsistency of accounting principles
- ✓ Intangible Assets 『Recognition』 Inconsistency of accounting process
- ✓ Intangible Assets "Evaluation』 Inconsistency of accounting conception

I -2. Current reporting limitations of Intangible Assets



I -2. Current reporting limitations of Intangible Assets

Three Inconsistency in financial reporting

of Intangible Assets (1)

- Definition of Intangible Assets: control, future economic benefits +
 identifiability
 - ✓ Including identifiability concept to Intangible Assets definition perpetuates Intangible Assets are fundamentally different from tangible assets.
 - ✓ Not recognizing internally created Intangible Assets conveys the idea of the need of new recognition criteria differed from tangible assets.
 - * The core issue of recognition, whether tangible or intangible is "unit of account", not "identifiability". (AASB, 2008)

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I -2. Current reporting limitations of Intangible Assets

¶ Three Inconsistency in financial reporting of Intangible Assets (2)

 Recognition of Intangible Assets: Followed by inconsistency of acquisition and non-acquisition (e.g. Internally developed)



I -2. Current reporting limitations of Intangible Assets

1 Three Inconsistency in financial reporting of Intangible Assets (3)

- Initial measurement of Intangible Assets: Inconsistency between fair value of acquired Intangible Assets, internally developed Intangible Assets or cost measurement of expense
- Subsequent measurement of Intangible Assets: Revaluation model can be applied. However, unlike tangible assets, FV assessment of Intangible Assets is limited to when there's an active market → As revaluation model is useless, discrepancy between BV and FV is expanding
- X It is reasonable to assume that tangible aseets are going to provide future economic benefit at least as much as the cost of acquisition, however it is hard to evaluate future economic benefits of I/A, due to scalability, synergies and network (It is irrational yo estimate I/A will provide future economic benefits as much as the cost of acquisition), cost measurement of I/A has low relevance.²⁰

II. Intangible Assets report Improvement Plan

Categories

Narrative reporting : IASB*, FRC**

- * Management commentary project
- ** Discussion paper(2019)

Cost spent for Intangibles : FRC, FASB***

*** FASB research on disclosure of R&D expenditure and FV of intangibles(2004)

Metrics reporting (e.g. customer satisfaction

(e.g. customer satisfaction, employee turnover rate, etc.) : Integrated reporting, FRC

FV for intangible assets : FASB, AASB****

**** AASB DP Initial accounting for Internally generated intangible assets(2008)

II. Intangible Assets report Improvement Plan II-1. Improvement study Case: AASB

Internally developed Intangible Assets reporting plan of AASB(1)

Identify

 ✓ Basically apply principles and guidelines of IAS 38(Intangible Assets)and IFRS 3(business combinations)

Recognition

- ✓ IAS 38 cost-based model : recognize internally developed Intangible Assets
 - \times Technical \cdot commercial feasibility \rightarrow evidence of plan exists or

implementation of plan

- ✓ IFRS 3 valuation-based model : Based on hypothetical business combination, internally developed Intangible Assets are recognized and evaluated as FV
 - ※ (IFRS 3 BC126) When Intangible Assets are evaluated by FV, there's no need to precondition recognizing future economic benefits. This is because the measurement reflects expectations (i.e. probability effects) of future economic benefits.

II. Intangible Assets report Improvement Plan II-1. Improvement study Case: AASB

¶ Internally developed Intangible Assets reporting plan of AASB(2)

Presentation and disclosure

- ✓ IAS 1 : Separate Presentation of internally developed Intangible Assets Management's judgement on internally developed assets and disclosure of accounting policy
- ✓ Cost-based model : Disclosure of total internally developed

 Intangible Assets cost and recognized cost

 Disclosure of grounds for capitalization by management
- ✓ Valuation-based model : Disclosure of assumption and method for determining FV In case the assumption is changed, such changes and result shall be disclosed Disclosure of total cost of internally developed

Intangible Assets and original cost per project23

Ⅱ. Intangible Assets report Improvement Plan**Ⅱ-1.** Improvement study Case: FRC

¶ Business Reporting of Intangibles of FRC(1)

Narrative reporting

- ✓ Management Commentary or Strategic Report
- ✓ Since including all intangibles is impractical, value added activities of the business, Intangible Assets which plays a critical role in business model shall be reported
- ✓ It can be differed based on business sector and companies, therefore the company shall select and input basis for such selection
- ⇒ In order to address comparability and reliability, definitions and calculations are being used

II. Intangible Assets report Improvement Plan II-1. Improvement study Case: FRC

¶ Business Reporting of Intangibles of FRC(2)

Metrics reporting

- ✓ Set metrics that can used within specific sectors
- ✓ Repurchase rate or customer satisfaction measurement, in case customer loyalty is compulsory factor in successful business
- ✓ Sales ratio of new products, in case innovation ability is the company's competitive edge
- ✓ Employee T/O rate, in case an employee's talent is critical value driver

	20X1	20X2	20X3
Repeat customer ratio (Percentage of customers who purchase again within 12 months)	55.0	60.0	65.2
We believe that the increase in the repeat customer ratio reflects in products and customer service. It continues to fall short of our ta			both ou
	20X1	20X2	20X3
Return ratio (Value of products returned as a percentage of items delivered)	8.0	6.0	6.1
As we consider it a necessary investment in our relationship with accept customer returns. However, we recognise that retudisappointing customer experience and also increase our costs. in 20X2 followed changes to our product specifications to provide about our products. The slight increase in 20X3 was due to reexcluding product X, the return ratio was 5.8%.	The red more he	ales ind luction in elpful info	licate a returns ormation

I. Intangible Assets report Improvement PlanII-1. Improvement study Case: FRC

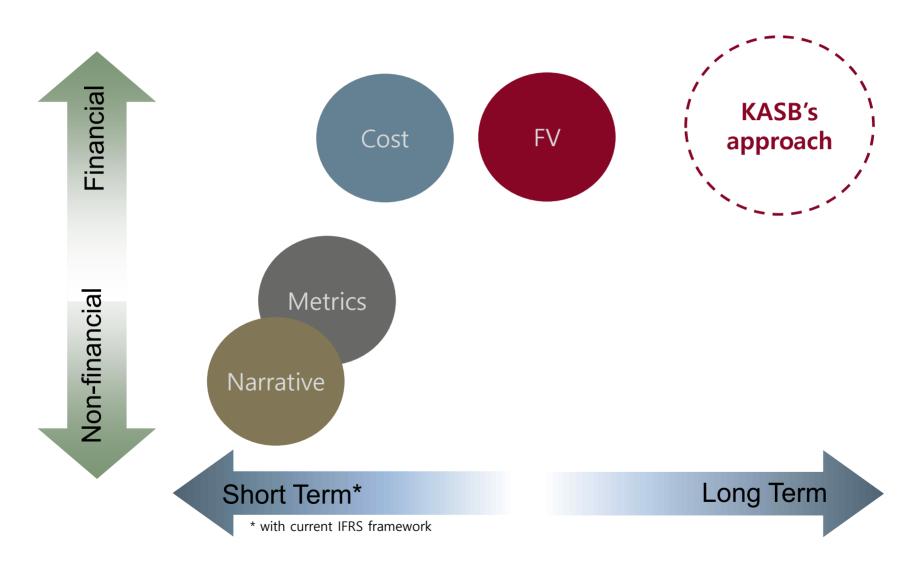
¶ Business Reporting of Intangibles of FRC(3)

Disclosure of expenditure on future-oriented Intangibles

✓ Expenditure on future-oriented Intangibles (e.g.: employee training, brand advertisement, newly developed of business process), for the purpose of earning benefit after the current period, but recognized as expense shall be separately disclosed.

Production staff training for the future	20X1 £'000	20X2 £'000
Cumulative amount at the beginning of the year	510	627
Expenditure in the year	337	418
Deemed to have benefited current year	(170)	(209)
Reduction to reflect the abandonment of project X	(50)	_
Cumulative amount at the end of the year	627	836

Training for production staff is deemed to benefit operations over the average product cycle of three years.



¶ Why do we need The Third Way..?

(출처: 월간공인회계사 '18년 5월호 특별기고문, 한국회계기준원 서영미 책임연구원)

- As user's demand for Intangible Assets information is increasing, many companies are making their efforts to meet the demand. However, the changes in non-financial sector is not making any significant result. This is because the information is scattered and it makes difficult for users to be provided with consistent form of information with low comparability.
- Many efforts have been made in non-financial sectors to provide Intangible
 Assets information, whereas efforts are lacking in financial accounting sector.

 Not enough efforts are being put to find measurement and reporting of
 Intangible Assets that can be directly used to evaluate a company's value.

The background of The Third Way

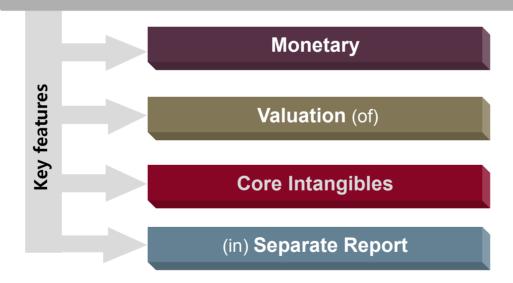
- Financial information user note more Intangible Assets in decision making, in addition to the amount already acquired in a business combination, and reflect the recognition method to accounting principles as a way of reforming Intangible Assets accounting process
- * In M&A practice, recognition practice of the core Intangible Assets by each industry is already established.
- ✓ Therefore **Association of Invest Management Research (AIMR)** argued that "Financial reporting shall be revised to recognize more economic reality of I/A".
- ✓ In addition, **CFA Institute** pointed out inappropriateness of I/A recognition. "Many companies around the world are being led by creation and usage of I/A. Much of the world's economic growth is derived from intangibles. However, current reporting lacks recognition of I/A and requirements of disclosure. Reporting of I/A has to be revised in a way that enables investors to understand companies rely on intangibles and provide necessary information to analyze values".

¶ Purpose and method

- Purpose: The value of Intangible Assets, which is not recognized in the current BS shall be reported with the same level of importance as other assets on a BS and provide information for decision making
- Three methods
 - ✓ New definition of core intangibles, which is the main driver of company's value
 - ✓ Measured in fair value of a monetary unit
 - * Information which investors want is quantified in monetary unit. As information is reported with monetary unit, which suits basic format of financial reporting, it serves information demand from BS users with direct and various format (which correspond to general purpose BS)
 - ✓ Present and disclose as core intangible assets on separate reporting, with
 the aim of including BS context

¶ Overview

Reporting the intangibles which are not recognized under current IFRS with an equal importance as other elements, so as to help with investment decisions



New definition of core Intangible Assets (1)

• Core intangibles are intangible factors that are **(b)** important to an entity in its **(a)** creation of value, whether or not they are secured by legal means and whether or not they meet the current definition of 'assets'

『UK FRC(2019)의 "Business Reporting of Intangibles: Realistic Proposals"』

** In M & A practice, the identification practices of core intangible assets ha ve already been established by industry. For example, according to HOULIH AN LOKEY's \$\[^2\)2017 Purchase Price Allocation Study (2018.12)\$\[^1\] the identifiable core intangible assets are divided into five groups: \$\(^1\)developed technologies (including patents), \$\(^2\) ongoing R & D, \$\(^3\) customer related factors. (Including orders remaining, customer contracts, customer relationships) \$\(^4\) trademarks and names (including domain names) \$\(^3\) other (including non-competition agreements, licenses, contracts, core deposits, etc.)

¶ New definition of core Intangible Assets (2)

- Core intangible assets are important intangibles that could affect the market as it continue to generate excess profits in relation to the reporting company's @(value creation) primary operating activities, and if the information is @(important) omitted or misrepresented, it effects information user's decision making (e.g. description on gap between market value and book value)
- * In the past structure, tangible assets mainly generated excess profit, but in the kno wledge-based economic structure, intangible assets generate excess profit.
- Importance of Conceptual Framework QC11 for Financial Reporting In case the information is omitted or misrepresented and if there's any possibility that such actions could influence user's decision making, it can be said the information is important. In other words, importance refers to characteristics and scope of relevant items in terms of a company's financial report or conformity based on the company's specific purpose

¶ New definition of core Intangible Assets (3)

- Core Intangible Assets can be <u>1 existing identifiable</u> Intangible Assets*(e.g, i ndustrial property rights, software, trademarks, memberships, licenses, etc.)
- * Identifiable Intangible Assets are reported in the financial statements, but as mentioned above, it implies limitations of cost measurement due to following factors (scalability, synergies, network effects)
- In addition, it can be ②synergies of identifiable assets or ③internally devel oped intangibles and not reported in FS, because of not meeting recogniti on criteria, such as goodwill.
- Aforementioned three core intangible assets, like the CGU, can be divided into ©(measurement) units of accounting that generate cash inflows and unit of accounting which of independently generates cash inflows (This does not simply refers to existing identifiability)

¶ New definition of core Intangible Assets (4)

- Core Intangible Assets of a reporting company may be more than one at the same time, depending on its importance.
 - ✓ For example, not only games but also trademark rights can be core intangibles in game industry.
- Core Intangible Assets can be differed based on sectors, and examples of p lausible core Intangible Assets are as follows;
 - ✓ Pharmaceutical Company : Patent Rights, Pharmaceutical Process, New drug development
 - ✓ Airline company: Brand name, Air route, Maintenance skills, Service quality
 - ✓ **Telecommunications company** : IP, communication networks, customer relationships
 - ✓ Web-based company : Software, Website platform, Development technology

¶ Measurement of core Intangible Assets (1)

- Core intangible assets are measured at fair value at the point of initial recognition and continue to be evaluated as FV (not optional selection between cost model or revaluation model)
- Specifically, core intangible assets are measured and valued as "the prese
 nt discounted value of future net cash inflows" (conforms PV concept in

 Conceptual process for financial reporting
 - ✓ Core Intangible Assets has to be assessed based on rational and objective ve assumption which reflects optimized estimation of the management
 - ✓ Therefore, even in the planning stages, net cash flows generated from the core intangibles of internal planning shall be also assessed based on reasonable and objective assumptions.

¶ Measurement of core Intangible Assets (2)

Multi-period Excess Earning Method

- ✓ Deducting contributory assets charge (i.e, excess profits) from core Intang ible Assets gains and discount at a discounting rate which reflects intrinsi c risks of the core Intangible Assets
- ✓ The cost of a contributing asset is measured at the cost of renting or leas ing of other asset to make a profit of the core Intangible Assets

Relief-From-Royalty Method

- ✓ Mainly used for licensed assets such as trademarks and patents
- ✓ The asset value is the PV of the royalty exemption
- ✓ Multiply objective and appropriate royalty rate to the future cash flows g enerated by the core Intangible Assets and calculate annual royalty rate a nd discounting the number to their PV.

Reporting of core Intangible Assets (1)

Separate reporting

- ✓ Intangible elements that are critical to a corporate value are all marked as Intangible Assets regardless of internal developed or externally acquir ed
- ✓ Voluntary · supplementary disclosure
- ✓ Consists of summary of core Intangible Assets, main assumptions, evaluation details, disclaimer
- ✓ Disclosure of the current year and estimation of the previous 2 years

Reporting of core Intangible Assets (2)

Statement of Core Intangibles Assets

AB company
Evaluation date December 31, 2018
"The attached Core Intangible Elements
Report has been reported by our company."
AB Representative Director XXX

[Disclaimer]

The report is the management's estimation of the core intangible assets held by AB. It is not the subject of external audit and is intended to supplement the financial statements to help understanding the company's financial position.

List

- 1. Summary
- 2. Major Assumptions
- 3. Evaluation Details
- 4. Annex

Reporting of core Intangible Assets (3)

1. The Core Intangible Assets Summary

As of December 31, 2018 ("Evaluation Date"), the details of the Company's core intangible assets and the fair value of each element are as follows.

				(단위: 억)
			2017	2018	2019
핵심	핵심무형자산(예: 게임)*		XXX	XXXX	XXXX
			XXX	XXX	XXX
	① 제공 중인 서비스	AA			
		ВВ	XX	XX	XX
		СС	XX	XX	XX
	② 제공 예정인 서비스	DD	XX	XX	XX
	③ 기타 내부창출	EE	XX	XX	XX
	핵심무형자산				

^{*} The above intangible components are not included in the statement of financial position as of the evaluation date, or are included at cost. In addition, the evaluation results may vary significantly depending on the evaluation point due to changes in the business plan and market environment.

[General Principle]

- The general principles for evaluating our core intangible assets are as follows:
- In accordance with the Guidelines for Reporting Core Intangible Assets ("Guidelines"), the Company classified its core intangible assets into services that are currently offered at the date of evaluation and those that are to be provided in the future. Given the uncertainty in estimating future cash flows, each valuation result may differ in confidence.
- Services that are in the process of being created internally but not planned for the future are excluded from evaluation because they have a low reliability in the cash flow estimates according to the guidelines.
- In accordance with the guidelines, the value of our core intangible assets was assessed using the "Multi-Term Excess Profit Act," and the value of trademark rights was evaluated using the "loyalty Exemption Act."
- Future cash flows based on core intangible asset valuations are estimated based on our business plan, and the discount rate used in the assessment is an additional risk premium to the weighted average cost of capital (WACC), taking into account the inherent risks of core intangible assets.

Reporting of core Intangible Assets (4)

2. Main Assumptions

2.1 Identification of Core Intangible Assets

The Company identified and measured the services AA, BB, CC, etc., DD, and other core intangible elements, such as Trade Name, as core intangible assets.

...

2.2 Intangible Asset Valuation Method

The following valuation techniques are used to evaluate the core intangible assets held by the Company Multi-period Excess Earning Method N: Relief-From-Royalty Method:

••••

2.3 Discount rate

The discount rate used to assess the Company's core intangible assets is xx%.

••••

2.4 Costs of Contributing Assets

To assess core intangible assets, the cost of contributions made by assets other than the intangibles are deducted from the cash flows of the core intangible assets.

••••

2.5 Amortization Effect

In order to evaluate core intangible assets, we considered tax benefits .

Amortization effect:
Applicable tax rate:

3. Evaluation details

3.1 Key Input variables and major asssumptions for Valuation of AA

(단위: 백만원)	2018	2019	2020	2021	2022
핵심무형자산AA매출액	XX	xxx	xxxx	xxxx	
AA 영업이익	xx	xxx	xxx	XXX	
영업이익률	xx%	xx%	xx%	xx%	
차감:법인세비용(🚧)			(xx)	(xx)	
세후추정이익(기여자산원가차감전)			xxxx	xxxx	
차감:기여자산의원가					
순운전자본			(x)	(xx)	
유형자산			(x)	(x)	
AA초과이익			xxx	xxx	
기중조정계수			x.xxx	x.xxx	
현재가치계수			x.xxx	x.xxx	
AA초과이익의현재가치			xxx	xxx	

핵심무형자산 AA의 가치	
초과이익의 현재가치 합계	xxxx
상각절세효과(TAB)	xxx
합계	xxxx

The major assumptions applied to assess the core intangible assets AA are: Valuation approach-Sales- remaining periods of service

Thank you