EFRAG SECRETARIAT PAPER FOR PUBLIC MEETING

IFRS 16 *Leases*
Quantitative assessment of accounting impacts

Objective

1 In the context of its endorsement process for IFRS 16 *Leases,* EFRAG is required to describe the impacts of the new requirements. IFRS 16 will significantly change reported assets and liabilities of lessees, and also impact profit or loss due to the different cost recognition pattern.

2 The current paper presents a simulation of the quantitative accounting impact on a sample of listed entities in the European Economic Area. The purpose of the session is to illustrate the methodology, limitations and results.

3 The simulation of the accounting impact was presented to EFRAG TEG in June. This paper reflects the suggestions made during the discussion.

4 EFRAG Secretariat is performing a similar exercise for entities that meet the definition of small and medium entities under the European legislation. However, we note that there is limited data available for SMEs reporting under IFRS.

5 EFRAG Secretariat notes that the impact analysis to be performed under the request for endorsement goes beyond the quantitative assessment of accounting impacts.

Sample selection

6 EFRAG Secretariat used a commercial database (S&P Capital IQ) to extract accounting information for listed entities that are incorporated in one of the thirty-one countries of EEA (the 28 EU countries plus Iceland, Liechtenstein and Norway).

7 At the date of the extraction, 2015 financial information for many entities had either not yet been included in the database or was based on press releases. Therefore, the selection was based on the financial information for 2013 and 2014. Amounts for entities reporting in currencies other than Euro were translated using historical rates.

8 The original selection included 4,596 entities. It was noted that for a large number of entities the information on operating lease commitments was missing. Given that this is the fundamental information to simulate the accounting impact of the new requirements, EFRAG Secretariat decided to restrict the sample.

9 The restricted sample was selected as follows:

(a) Entities were sorted by market capitalisation, and the 250 entities with the largest market capitalisation were selected;

(b) Entities were then sorted by the size of the reported operating lease commitment for the next year, and the 250 entities with the largest operating lease commitment that were not included sub a) were added to the restricted sample;

(c) The commercial database reports a metric called 'Operating lease debt equivalent' which is based on 8 times the lease expense for the period. Entities were sorted by this metric and the 250 entities with the largest operating lease debt equivalent that were not included sub a) or sub b) were added to the restricted sample.

10 EFRAG Secretariat believes that the selection criteria allowed the identification of a sample that includes major entities and entities that will be significantly affected by the new requirements. On one side, the inclusion of large caps especially from the Global Industry Classification Standard (GICS) industry classification Financials may underestimate the relative impact as these entities tend to have very large balance sheets; on the other side the inclusion of entities with the biggest lease commitments could overestimate the impact. The use of 'operating lease debt equivalent' was designed to include entities with significant leases for which information on operating lease commitments was missing in the original extraction for whatever reason.

11 One entity was eliminated after noting that the 2014 financial information was based on *pro-forma* numbers produced for a prospectus following a spin-off. The resulting restricted sample includes 417 entities from nineteen countries.

12 The entities in the restricted sample represent:

(a) Market capitalisation of 7.616 billion Euro (79% of the total for the full sample);

(b) Assets of 39.603 billion Euro (86% of the total for the full sample); and

(c) Net assets of 4.742 billion Euro (79% of the total for the full sample).

13 As a comparison, the sample in the IASB effects analysis included 348 European entities. 232 entities are common to the two samples; out of the remaining 116 entities in the IASB sample, thirty-five are incorporated in European countries outside the EEA.

14 When the extraction did not report operating lease commitments, EFRAG Secretariat checked the notes to the financial statements and made manual adjustments. Twenty-two entities in the restricted sample did not report the information in their notes, with some of them explicitly stating that the commitments had been omitted because they were not material. Half of those entities were in the Financials industry.

15 All the other data used in the simulation (total assets, total debt, net equity, net income and capital lease debt) are based on the extracted data and were not subject to verification. Total debt is a supplemental line item across all templates that includes short-term borrowings, capital leases and long-term debt (including current portion)

Methodology and assumptions

Simulated impact on the balance sheet

16 The simulation of the lease liability and right-of-use asset required a number of assumptions:

(a) For those entities that reported operating lease commitments using the time bands 'Due within 12 months', 'Due within 2 and 5 years' and 'Due after 5 years', EFRAG Secretariat assumed a constant amount in years 2 to 5;

(b) EFRAG Secretariat assumed a linear distribution of commitments in year 5 and beyond. In other words, if an entity reported 100 CU of commitments for year 5 and 450 CU due after 5 years, EFRAG Secretariat allocated 100 CU to years 6 to 9 and the residual to year 10;

(c) EFRAG Secretariat assumed a discount rate of 5% for all entities;

(d) EFRAG Secretariat assumed an original and residual lease term of 8 and 5 years respectively to calculate the right-of-use asset in relation to the lease liability; the 5 years was based on the average weight of the lease commitment by year. Based on these inputs, the right-of-use asset is equal to 93.3% of the lease liability.

17 EFRAG Secretariat notes that the simulation is only illustrative and does not correspond to effect of the initial application of IFRS 16 due to the following reasons:

(a) The simulation is based on 2014 accounting data;

(b) The simulation is based on a single set of assumptions described above for all the companies in the sample;

(c) The inclusion in the restricted sample of entities that did not report operating lease commitments; and

(d) IFRS 16 provides a number of elections for the first application.

Simulated impact on the profit or loss

18 IFRS 16 does not affect the total cost recognised by the lessee over the lease term, but changes the time pattern recognition compared to operating lease accounting under IAS 17. All other things being equal, a lessee recognises a higher cost in the early period of the lease under IFRS 16, and a lower cost in the late period.

19 It is therefore important to be aware that any simulation of the impact on the profit or loss is not representative of a recurring impact.

20 After simulating the initial impact on the balance sheet, EFRAG Secretariat simulated the effect on the profit and loss in the first following period. The effect was determined by comparing:

(a) the operating lease commitments within 12 months (which would represent the simulated cost under IAS 17); and

(b) the sum of:

(i) An amortisation charge calculated by dividing the carrying amount of the simulated right-of-use asset by the assumed residual lease term; and

(ii) An interest charge calculated by applying the discount rate to the simulated lease liability.

21 As explained above, the simulated amounts have been determined by using a single set of assumptions for all entities in the sample, but the operating lease commitments have a different distribution for each individual entity. Therefore, the comparison overestimates the positive impact for those entities with a significantly higher portion of lease commitments within 12 months than the average of the sample, and overestimates the negative impact for those entities with significantly longer term of commitments than the average of the sample.

Quantitative results

Simulated impact on balance sheet

22 The simulation provided the following results:

(a) The simulated lease liability and right-of-use asset amount to 450.9 and 420.7 billion Euro respectively;

(b) The simulated lease liability represents 4% of the item 'total debt' as defined in the commercial database, and 1.3% of the total liabilities (calculated as the difference between total assets and net equity). When entities in Financials industry are excluded, the simulated lease liability represents 16% of the total debt;

(c) The simulated right-of-use asset represents 14.8% of the net property, plant and equipment;

(d) The difference between the simulated lease liability and right-of-use asset of 30.2 billion Euro represents 0.6% of the net equity;

(e) The simulated lease liability represents 8.7 times the amount of capital leases debt (450.9 billion to 52 billion Euro);

(f) The 'Operating lease debt equivalent' for 2014 amounted to 786.6 billion Euro for the restricted sample, significantly higher than the simulated lease liability.

23 EFRAG Secretariat has performed a sensitivity analysis of changes in the discount rate. Amounts are expressed in billions of Euro:

Discount rate	Simulated lease liability	Simulated lease liability/ Total debt	Simulated ROU asset/ PPE	Impact on equity
3%	490.6	4.3%	16.6%	(0.43)%
4%	470.0	4.1%	15.7%	(0.54)%
5%	450.9	4%	14.8%	(0.64)%
6%	433.1	3.8%	14.1%	(0.72)%
7%	416.4	3.7%	13.4%	(0.79)%

24 The impact on equity is not particularly sensitive to the discount rate, because of the similar sizes of the right-of-use asset and the lease liability.

25 The following table provides a breakdown of the simulation by industry under the baseline scenario. The categories are based on the Global Industry Classification Standard.

Industry	**Simulated liability**	**in % of total debt**	**Impact on equity**
Consumer Discretionary	93,837.9	17%	-1.2%
Consumer Staples	64,494.8	21%	-1.2%
Energy	60,830.5	26%	-0.8%
Healthcare	17,531.3	10%	-0.5%
Industrials	79,528.7	20%	-1.4%
Information Technology	8,208.1	22%	-0.6%
Materials	14,289.3	9%	-0.3%
Telecommunication	49,406.7	20%	-1.9%
Utilities	16,584.6	4%	-0.3%
Total without Financials	**404.712.0**	**16%**	**-0.9%**
Financials	46,173.5	1%	-0.2%
Grand Total	**450,885.5**	**4%**	**-0.6%**

Simulated impact on profit or loss

26 Based on the assumptions and limitations above, the simulated lease expense for the first year amounts to 106.7 billion Euro and is 1.8 billion Euro lower than the lease commitments within 12 months. The difference represents 0.3% of the 2014 income before taxes. The impact on net income varies significantly across industries.

27 EBITDA under IFRS 16 would be increased because all the lease expense is presented as either amortisation or interest expense. Based on the operating lease commitments within 12 months for the entities in the sample, and excluding the Financials industry, the impact represents 10.2% of EBITDA.

Industry	**Simulated cost**	**Op lease commit**	**Impact on EBT**	**Impact on EBITDA**
Consumer Discretionary	22.2	20.2	-2.0%	12.3%
Consumer Staples	15.3	13.7	-2.3%	11.9%
Energy	14.4	16.4	3.5%	10.5%
Healthcare	4.1	3.9	-0.9%	6.0%
Industrials	18.8	19.7	1.8%	17.3%
Information Technology	1.9	2.2	1.6%	8.2%
Materials	3.4	3.8	0.9%	4.2%
Telecommunication	11.7	10.0	-6.8%	13.2%
Utilities	3.9	3.4	-1.9%	3.3%
Total without Financials	**95.7**	**93.4**	**-0.6%**	**10.2%**
Financials	10.9	15.1	2.9%	
Grand Total	**106.7**	**108.5**	**0.3%**	

28 EFRAG Secretariat has performed a sensitivity analysis based on changes in the discount rate. Amounts are in billion Euro.

Discount rate	Simulated cost	Difference	Impact on EBT
3%	108.7	+0.2	-
4%	107.7	-0.8	-0.1%
5%	106.7	-1.8	-0.3%
6%	105.8	-2.7	-0.5%
7%	104.8	-3.7	-0.6%

29 The impact on profit or loss is highly sensitive on the assumptions on the lease term, because the right of use asset is amortised on the assumed residual lease term. The following table illustrates the sensitivity to changes in the assumptions (the discount rate is kept at 5%). The simulated liability does not change as it is based on the assumed distribution of the operating lease commitments at the individual entity level, not on the assumed residual lease term.

Assumptions		ROU asset	Simulated cost
Original	Residual		
4	7	420.4	127.7
4	8	410.9	125.3
4	9	401.7	123.0
5	7	430.4	108.6
5	8	420.7	106.7
5	9	411.2	104.8
6	7	440.5	96.0
6	8	430.6	94.3
6	9	420.9	92.7

30 Under IFRS 16, cash flow from financing activities would be decreased, because the payment for the interest component would be presented as a financing outflow, while payments for operating leases under IAS 17 are presented as operating outflows. Under the baseline scenario, the interest component would be 22.2 billion Euro and would represent 11% of the financing cash flow sub-total reported by the entities in the sample for 2014. When excluding Financials, the ratio would not substantially change.

Other studies

31 The IASB's effects analysis on the likely costs and benefits of IFRS 16 was based on a sample of 1,022 entities that amounted for 76% of total off balance sheet leases for listed entities. 348 European entities were included in the sample. The IASB assessed a lease liability of 1,661.8 billion USD, representing on average 5.4% of the total assets. The effects analysis show that the effect varies significantly across industries, with the lease liability representing over 20% of the total assets for airlines, retailers, transport and leisure.

32 A global study on the impact of lease capitalisation, excluding the United States, has been conducted by PwC[1]. For the entities in the European Union the expected increase in debt is 21% and the increase in EBITDA is 11%. The leverage for European entities is expected to increase by 0.23 from 1.55 to 1.78 and at the same time, their solvency to decrease from 46.0% to 41.6%. Similarly to the IASB's findings, the PwC report notes that certain industries will be particularly affected, such as retail, airlines, professional services and health care.

33 A study has also been conducted to assess the impact of lease capitalization on relevant Spanish entities[2] (52 entities across different industry sectors). The impact for non-current assets represents 19% over total non-current assets while for non-current and current liabilities it represents 18.3% over total liabilities.

Question for EFRAG Board members

34 Do EFRAG Board members believe that the current analysis achieves the objective to illustrate the quantitative accounting impact of IFRS 16?

[1] *A study on the impact of lease capitalisation,* February 2016, PwC

[2] *Considering the effects of lease capitalisation on key financial ratios,* September 2013, M. Angels Fito, S. Moya and N. Orgaz