



EUROPEAN COMMISSION
DIRECTORATE-GENERAL
TAXATION AND CUSTOMS UNION
Analyses and tax policies
Analysis and coordination of tax policies

Brussels, September 2009
Taxud/E1/
DOC: JTPF/018/BACK/2009/EN

EU JOINT TRANSFER PRICING FORUM

**BM contribution to illustrate available generic evidence relating
to intra group services profit margins.**

Meeting of 27th October 2009

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European Service Provider Profit Margin Analysis*

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Draft
September 2009

* Including Impacts of the Economic Downturn

A. INTRODUCTION

The purpose of the analysis presented in this paper is to compare margins earned by independent services providers throughout Europe. It includes also an analysis of the impact of the current global economic downturn on the profitability of these entities.

We first describe a broad pan-European sample that we have formed of independent routine service providers. These entities were selected based on various characteristics believed to make them generally good comparables to intercompany service providers.

We then divided the full sample of routine service providers into subgroups corresponding to the first two digits of their reported NACE Rev. 2 codes, which indicate the type of service that each entity principally provides. We compared the profitability of entities across these subgroups and examined its variation.

Considering the importance of the current economic downturn, we then conducted a statistical analysis to evaluate the impact that the downturn may have on the margins we would expect of routine service providers.

Concluding remarks are then presented.

B. DATA OVERVIEW

Our objective was to form a sample of data providing a complete view of the profitability over the 1999 through 2007 nine-year period of various types of service providers operating across Europe. As such, we made our search criteria as broad as possible and have obtained a sample of 9026 routine European service providers.

Search process

We conducted this analysis using the AMADEUS database containing financial data on more than 1.5 million companies throughout Europe. The search strategy we have employed for this analysis is described in detail in Appendix 1 of this document.

We aimed to obtain a broad pan-European (EU27+3) sample of routine service providers. We have kept screening criteria to a minimum required to provide a sample of companies with sufficient independence, years of data (6 or more out of 9 years with required data), size (revenue of at least 1 million Euro) and routine characteristics (intangible assets to total assets less than 5 percent). These criteria were used as we expect them to provide well-balanced results. However, the purpose of this paper is not to recommend these as the default approach.

Sample Summary

The sample of companies on which we conduct the analysis described below include 9026 service providers. This broad sample of routine service providers exhibits the sufficient data counts and profitability distributions by year indicated in the tables below. Our analysis is especially concerned with the average profitability and 25th percentile (lower quartile), 50th percentile (median) and 75th percentile (upper quartile) of profitability.

Table 1 – Summary of Broad Service Provider Sample

Operating Profit / Total Cost (Full Cost Markup)										
	1999	2000	2001	2002	2003	2004	2005	2006	2007	Total
Observations	6846	7565	8006	8673	8741	8825	8886	8640	6674	9026
90th percentile	26.5%	26.3%	25.5%	24.4%	23.2%	22.8%	23.8%	24.4%	25.9%	21.6%
75th percentile	11.9%	11.9%	11.8%	11.0%	10.5%	10.5%	10.7%	11.2%	12.1%	10.7%
Median	4.6%	4.7%	4.6%	4.2%	4.0%	4.2%	4.0%	4.4%	4.9%	4.7%
25th percentile	1.2%	1.3%	1.3%	0.9%	1.0%	1.1%	0.9%	1.1%	1.3%	1.7%
10th percentile	-1.6%	-1.9%	-1.8%	-2.5%	-2.1%	-1.8%	-2.1%	-1.7%	-1.0%	0.0%
Average	11.7%	9.0%	10.3%	9.3%	8.3%	6.9%	8.2%	8.9%	8.2%	8.3%

C. SERVICE PROVIDER COMPARISON

As seen above in the Table 1 summary of profitability results for all 9026 routine service providers in our sample, the median Full Cost Markup for these entities over the 1999 to 2007 period was 4.7 percent, while the 25th percentile result was 1.7 percent and the 75th percentile result was 10.7 percent. This broad sample of data includes a wide variety of companies providing various kinds of services. These service providers can easily be grouped, however, by the NACE code they report. We grouped companies according to their two-digit NACE Rev. 2 code (e.g., 18 for a company reporting NACE code 1811) as the two-digit level of codes was felt to be the most practical level for comparison (and groups companies by categories of services that are commonly discussed).

As presented in Table 2 below, these 9026 service providers can be grouped into 30 separate samples according to their two-digit NACE codes.

Table 2 – Summary of Service Provider Samples by Two-Digit NACE Rev. 2

NACE rev 2	Category Description	Count	25th Pct FCMU	Median FCMU	75th Pct FCMU	Average FCMU
18	Printing	434	2.3%	5.0%	8.5%	6.7%
33	Equipment repair	384	2.8%	5.1%	8.4%	6.8%
49	Land transport	1530	1.0%	2.8%	6.3%	4.4%
50	Sea transport	61	1.8%	4.7%	9.1%	8.6%
51	Air transport	37	1.2%	2.5%	4.9%	1.4%
52	Warehousing/storage	762	1.2%	3.3%	7.6%	7.3%
53	Postal/courier	19	0.6%	4.0%	18.1%	6.5%
55	Hotels	598	2.8%	9.0%	19.4%	12.8%
56	Food service	405	2.0%	4.8%	9.1%	6.4%
58	Publishing	282	1.9%	6.8%	14.5%	10.3%
59	Movie/TV production	110	1.4%	5.4%	11.5%	7.3%
60	Broadcasting	43	0.1%	5.7%	13.5%	7.2%
61	Telecommunications	71	0.3%	4.2%	10.2%	5.2%
62	Computer/IT services	373	2.5%	6.1%	12.8%	7.9%
63	Data/information services	58	3.2%	6.8%	15.1%	10.2%
64	Financial services	81	1.5%	4.9%	14.1%	9.7%
66	Brokerage/insurance	134	3.1%	13.3%	33.2%	20.8%
68	Real estate	665	4.8%	14.8%	29.3%	20.4%
69	Legal/accounting	123	2.3%	7.0%	18.5%	12.1%
70	Management	305	1.1%	5.0%	12.5%	9.3%
71	Engineering/architecture	670	2.6%	6.0%	12.8%	9.2%
72	R&D	62	0.7%	4.4%	9.4%	3.8%
73	Advertising/marketing	369	1.9%	4.2%	8.1%	6.4%
74	Design/other	73	1.9%	5.6%	11.2%	9.7%
77	Leasing	224	1.5%	5.1%	10.8%	7.9%
78	HR/employment agencies	98	1.3%	3.6%	6.7%	4.5%
79	Travel services	285	0.6%	1.6%	3.7%	2.8%
80	Security	129	1.7%	4.3%	9.3%	6.4%
81	Facilities	196	2.0%	3.9%	7.4%	5.8%
82	Admin/business support	445	1.4%	3.8%	8.0%	6.1%
All	TOTAL	9026	1.7%	4.7%	10.7%	8.3%

We see in Table 2 that profitability does vary across type of service provided, but variations across most service types is relatively limited. While brokerage and real estate-related services clearly show the highest margins, this may be at least in part due compensation structures based on factors other than own cost base (e.g., earning commissions on assets managed). For the categories of services generally considered in benchmarking of intercompany services provided (shown in bold in Table 2), median profitability for these services varies within the relatively tight range of 3.3 to 7.0 percent.

As benchmarking of service providers is conducted at a specific point in time, it is also useful to consider variation in service provider profitability across time. Table 3 below presents a summary of median service provider profitability by service category (two-digit NACE) and year.

Table 3 – Median Service Provider FCMU Profitability Across Time

NACE rev 2	Category Description	Count	1999	2000	2001	2002	2003	2004	2005	2006	2007	1999 to 2007 Median
18	Printing	434	5.7%	5.6%	4.8%	4.1%	4.1%	4.5%	4.0%	3.7%	4.4%	5.0%
33	Equipment repair	384	5.3%	5.4%	5.3%	4.7%	4.4%	4.5%	4.4%	4.2%	5.4%	5.1%
49	Land transport	1530	2.8%	3.1%	3.6%	2.9%	2.8%	2.8%	2.1%	2.6%	2.9%	2.8%
50	Sea transport	61	4.3%	2.9%	2.8%	3.9%	4.7%	3.6%	3.2%	3.6%	2.9%	4.7%
51	Air transport	37	1.8%	2%	3.5%	2.3%	3.2%	2.9%	2.1%	3.4%	2.3%	2.5%
52	Warehousing/storage	762	2.8%	3.1%	3.0%	3.1%	3.0%	3.0%	2.9%	3.2%	3.4%	3.3%
53	Postal/courier	19	3.3%	5.4%	8.3%	4.3%	4.0%	3.4%	2.9%	2.8%	1.7%	4.0%
55	Hotels	598	14.4%	13.4%	12.6%	10.9%	7.7%	6.6%	6.8%	7.7%	8.9%	9.0%
56	Food service	405	5.0%	4.9%	4.3%	4.7%	4.7%	4.3%	4.8%	4.5%	4.8%	4.8%
58	Publishing	282	6.2%	5.7%	5.5%	5.7%	5.9%	7.2%	7.3%	7.4%	7.0%	6.8%
59	Movie/TV production	110	5.1%	5.4%	6.7%	6.2%	4.1%	6.2%	3.9%	6.0%	7.6%	5.4%
60	Broadcasting	43	8.5%	8.6%	5.6%	8.4%	2.8%	5.9%	6.2%	5.2%	5.1%	5.7%
61	Telecommunications	71	3.1%	2.3%	2.3%	1.2%	3.3%	4.6%	5.3%	5.3%	6.8%	4.2%
62	Computer/IT services	373	6.6%	5.7%	5.3%	5.1%	5.5%	5.1%	5.6%	6.0%	7.2%	6.1%
63	Data/information services	58	6.0%	5.8%	5.4%	4.8%	6.0%	6.2%	8.3%	9.0%	7.2%	6.8%
64	Financial services	81	4.0%	6.8%	4.0%	2.6%	4.2%	4.9%	4.6%	3.6%	3.6%	4.9%
66	Brokerage/insurance	134	11.7%	9.1%	7.8%	5.6%	6.7%	9.5%	10.6%	14.1%	15.8%	13.3%
68	Real estate	665	13.5%	12.6%	13.1%	11.7%	12.9%	13.2%	13.0%	15.9%	15.8%	14.8%
69	Legal/accounting	123	6.4%	7.7%	5.9%	5.8%	5.1%	6.8%	6.5%	7.8%	9.9%	7.0%
70	Management	305	4.2%	3.9%	3.9%	4.0%	4.0%	4.3%	4.2%	5.1%	4.7%	5.0%
71	Engineering/architecture	670	5.1%	4.9%	4.9%	5.1%	5.3%	5.6%	5.9%	6.0%	6.6%	6.0%
72	R&D	62	4.5%	5.1%	3.5%	3.6%	2.4%	4.6%	3.3%	3.6%	4.2%	4.4%
73	Advertising/marketing	369	3.8%	4.2%	3.9%	3.4%	3.7%	4.1%	3.6%	4.3%	4.2%	4.2%
74	Design/other	73	5.3%	5.3%	5.4%	5.7%	4.5%	5.3%	5.2%	5.2%	6.7%	5.6%
77	Leasing	224	6.3%	5.2%	5.8%	3.9%	4.3%	4.3%	4.2%	4.6%	5.5%	5.1%
78	HR/employment agencies	98	2.8%	3.9%	3.8%	3.2%	3.2%	3.0%	3.1%	3.2%	4.3%	3.6%
79	Travel services	285	1.4%	1.5%	1.5%	1.7%	1.4%	1.5%	1.6%	1.4%	2.3%	1.6%
80	Security	129	3.5%	4.1%	4.1%	4.7%	3.7%	4.0%	3.6%	3.7%	4.1%	4.3%
81	Facilities	196	3.9%	4.2%	4.4%	3.4%	3.5%	4.0%	3.9%	4.0%	3.9%	3.9%
82	Admin/business support	445	3.8%	4.3%	3.5%	3.5%	3.2%	3.2%	3.4%	3.2%	3.7%	3.8%
TOTAL	Median	9026	4.6%	4.7%	4.6%	4.2%	4.0%	4.2%	4.0%	4.4%	4.9%	4.7%

We see in Table 3 that variation in median service provider profitability across time exists, but is relatively limited. As is evident from the total median service provider profitability across time shown at the bottom of Table 3, lower profitability is observed during the 2002 to 2005 period than is seen earlier and later, but this variation is less than one percentage point. This variation across time, and its potential link with overall macroeconomic conditions, is explored in detail in the next section of this paper.

D. ECONOMIC DOWNTURN ANALYSIS

The downturn in real output of multinational companies that we have seen over the past 18 months translates into decreased profitability earned or even loss making positions for many companies. We may expect that this decrease in profitability has occurred not only at diversified multinationals but also at relatively routine service providers.

The profitability margin of routine service providers within a multinational group is most often determined by reference to margins achieved by independent entities having a similar functional and risk profile and operating under similar circumstances. During an economic downturn, the margins earned by such independent entities may be reduced, as exceptional economic circumstances will be reflected at the entire value chain level.

Objective

The purpose of this portion of our analysis is to determine whether the level of profitability of routine service providers is impacted by the change in recent economic conditions. More specifically, we have analyzed the statistical significance and quantitative relationship between the profitability of routine service providers and the GDP growth. If it is the case that there is both a statistically significant and quantitatively significant relationship between routine service provider profitability and GDP growth, then we would expect that a downturn in GDP growth (or certainly negative growth), such as that taking place in the current economy, would indicate an expected decrease in the returns identified for routine service providers. Quantifying the relationship between GDP growth and routine service provider profitability will even allow us to project changes in routine service provider profitability given actual or projected changes in GDP growth.

European GDP Data

This analysis specifically compares the profitability observed for routine service providers to GDP growth, the most prevalent indicator of the economy's overall health in any given year. Our measure of GDP growth is the annual change of EU27 Real GDP (as provided by Eurostat, the Statistical Office of the European Communities¹). As shown below, during the 1999 through 2007 period, EU27 Real GDP growth reached a peak of nearly four percent annual growth in 2000, fell to a low of just over one percent annual growth around 2002/2003 and then rose to a new peak of three percent around 2007/2008.

Year	1999	2000	2001	2002	2003	2004	2005	2006	2007
EU27 Real GDP Growth	3.0%	3.9%	2.0%	1.2%	1.3%	2.5%	2.0%	3.1%	2.9%

As is well known and the cause of the present analysis, after 2007 European and worldwide GDP growth has slowed considerably and 2009 GDP is even expected to be lower than 2008 GDP in real (inflation-adjusted) terms in many countries. We use Eurostat's estimates/projections of EU27 Real GDP growth for 2008, 2009 and 2010, as shown below, in our analysis.

¹ Eurostat: <http://ec.europa.eu/eurostat>

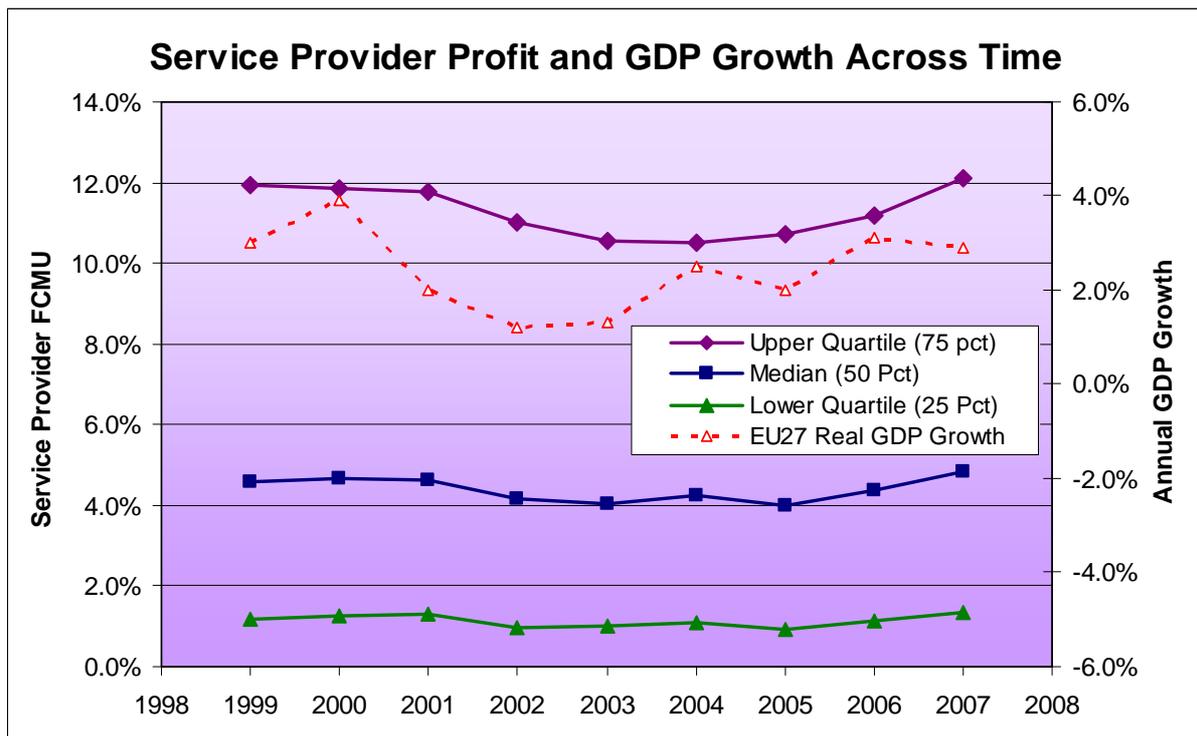
Year	2008	2009	2010
EU27 Real GDP Growth (Estimate/Projection)	0.9%	-4.0%	-0.1%

Observation of Relationships

As a first step in comparing routine service provider profitability to GDP growth we observed these variables across time and estimated various correlation coefficients.

As shown in the charts below for service providers, even casual observation appears to indicate that a positive relationship (correlation) between routine service provider profitability (at the 25, 50 and 75 percentiles) and GDP growth is present, with all variables showing lower values towards the middle of this period than at either end. In fact, the correlations between annual GDP growth and 25, 50 and 75 percentiles of service provider profitability are 0.60, 0.68 and 0.66, respectively.

Figure 1 – Service Provider Profitability Across Time



Therefore, casual graphical and basic correlation analysis suggests that there are indeed positive relationships between routine service provider profitability (at the 25, 50 and 75 percentile levels) and annual GDP growth. These correlations are statistically significant at the 95 percent confidence level under a one-sided hypothesis test.

As is clear from the charts above, however, the variation in annual GDP growth is quantitatively larger than the variation in routine service provider profitability. That is, for

every one percent change in annual GDP growth, we observe a much smaller change in routine service provider profitability at the 25, 50 or 75 percentile level.

Regression analysis

As a further step in our analysis, we utilized the tool of regression analysis in order to estimate the statistical significance and quantitative importance of the relationship between routine service provider profitability and GDP growth.

We first performed one regression for routine service providers for each of the 25, 50 and 75 percentiles of profitability. For example, one regression was performed to establish the relationship between GDP growth and the median level of profitability observed for routine service providers. Each estimation entailed the regression of the specific level of profitability in question on annual GDP growth, using each year’s observation as one data point (nine data points in all), as indicated for example below:

$$Median_profitability_{YEAR} = \alpha + \beta * GDP_Growth_{YEAR} + \epsilon_{YEAR}$$

The results from these regressions indicated whether the data available indicated a statistically significant relationship (even given the small number of data points used) and provided an estimate (indicated as Beta in the formula above) of the change in profitability that is associated with a change in the level of GDP growth, across time.

Service provider regression analysis results

The table below shows the results of three regression analyses for routine service providers, one at the 25th percentile (lower quartile) of profitability in each year, one at the 50th percentile (median) and one at the 75th percentile (upper quartile). As mentioned, just nine observations were used for each regression (annual observations from 1999 through 2007). The P values (which are one-sided as our hypothesis is that GDP growth and profitability are positively correlated) indicate the specific statistical significance of GDP growth on each level of profit. The Beta values indicate the quantitative significance of the relationship between GDP growth and each level of profitability.

Table 4 – Service Provider Profit Level vs. GDP Growth Regression Results

<u>Routine Service Providers</u>			
Regression of profit level on GDP growth			
	N	P value	Beta
P25	9	0.03	0.11
P50	9	0.02	0.24
P75	9	0.04	0.43

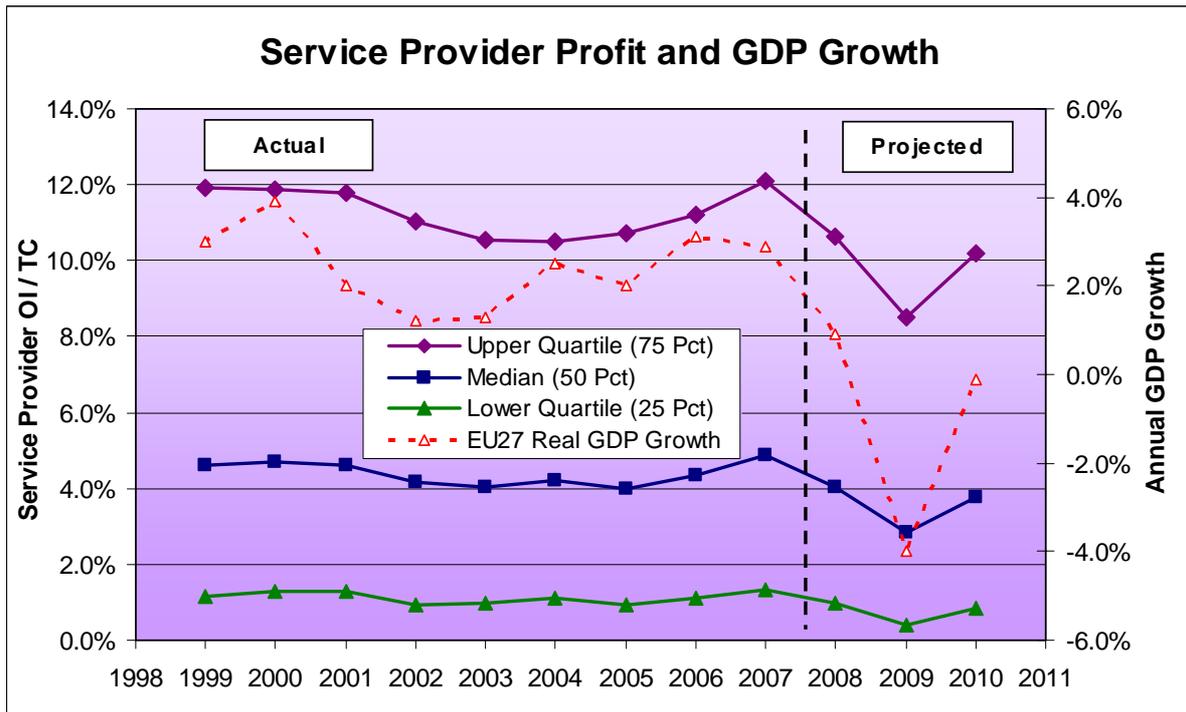
Considering the results shown above for the regression at the median of service provider profitability, we see that the relationship between GDP growth and median profitability is statistically significant at the 98 percent level, which is generally accepted to indicate statistical significance and is actually quite strong considering the small number of observations used in the regression. The Beta value of 0.24 for this regression indicates that, all else constant, the median level of profitability of a sample of routine service providers is expected to be 0.24 percent higher for each one percent higher that is annual GDP growth. In other words, all else constant, if median profitability is shown to be 5.0 percent in a year with 5 percent GDP growth, then median profitability would be expected to be 6.2 percent in a year with 10 percent GDP growth and, on the other hand, 3.8 percent in a year with zero percent GDP growth. Thus, for each one percent higher (lower) annual GDP growth the 25th percentile of the comparable sample will be expected to be 0.11 percent higher (lower), the median will be expected to be 0.24 percent higher (lower) and the 75th percentile will be expected to be 0.43 percent higher (lower).

Intuitively the results shown appear logical. A booming economy is expected to result in higher profitability for most companies, including routine service providers. However, we would expect that changes in routine service provider profitability would be somewhat limited as these routine service providers are thought to be at least somewhat insulated from the full volatility of the overall economy.

Implications

Given the positive relationships observed between GDP growth and profitability of routine service providers, it is clear that even routine service providers are not fully isolated from economic booms or downturns. Therefore, one may expect that the current downturn will have a significant impact on the profitability of routine service providers and thus the benchmarking samples that are formed to estimate arm's length ranges of profitability. This possibility is illustrated in Figure 2, which presents projections of service provider benchmarking results over the 2008 through 2010 period based on the results of the regression analysis presented above and projection of EU27 GDP growth.

Figure 2 – Projections of Service Provider Profitability Across Time



Considering variation in service provider profitability across time overall, the close relationship observed between profitability and GDP growth (both in terms of simple correlation and as shown through regression results) is indication that variation in service provider profitability across time can largely be explained by variation in broad macroeconomic factors such as GDP growth.

E. CONCLUSION

Variation in profitability across most types of routine services providers is relatively limited. While some variation does exist, profitability of routine entities providing a wide range of services generally falls within a limited range. As such, rules of thumb for profitability mark-ups to be provided to routine service providers within a group is supported by data observed for independent routine service providers operating across Europe.

The profitability of even routine service providers is, however, influenced by the conditions of the economy as a whole. Profitability does vary to some degree across time. Variation in routine service provider profitability over time was found, however, to be very closely linked to changes in the health of the overall European economy. Variation in profitability can largely be explained by macroeconomic fluctuations.

It therefore appears that at least for certain categories of what are generally considered to be routine service activities, benchmarking results based upon the profitability of independent service providers is largely expected to fall within common rules of thumb.

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Brussels,
September 2009

Appendix 1 - Economic Analysis Search Process

Data used in the search

- 1 We have performed this analysis on a pan-European level.
- 2 The focus of our comparable search is to identify entities operating as routine service providers.
- 3 The source of data for our search was the AMADEUS database. AMADEUS is a commercially available database containing data on more than 1.5 million companies in 41 countries. For this benchmarking analysis, we used version 49.3 of the Amadeus database, which is dated January 2009. The benchmarking analysis covers the years 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006 and 2007. The companies which are registered in the AMADEUS database formed the starting point for our search.
- 4 The first stage in our search process was to use the AMADEUS search engine to identify a broad set of companies for further analysis. There were several steps in this first stage of the search process, as described below.
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The AMADEUS search

- 6 The search process involves the examination of the companies in AMADEUS, the elimination of unsuitable companies and the selection of routine service providers.

(i) Various steps in the search process within AMADEUS

Step 1: Territory

7 The database was systematically searched for companies based in the European Union (27)² together with Iceland, Norway or Switzerland. The latter countries were also selected as their market conditions can be considered to be broadly comparable to the EU market. This resulted in a selection of all companies that are resident in one of the following countries: Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

Step 2: Independence

8 The second step in the Amadeus selection process was to reject non-independent companies, since the results of controlled or dependent companies could be distorted by transactions with their affiliates. Therefore we rejected all companies identified in the AMADEUS database as being non-independent.

9 In the sample, we selected companies having:

- “A” independence rating
i.e. with no shareholders recorded with more than 25% direct or total ownership.

- “B” independence rating
i.e. with no shareholders recorded with more than 50% direct, indirect or total ownership, but with one or more shareholders recorded with more than 25% direct or total ownership.

² As per 31 January 2007

- 10 Next to the above we eliminated companies that own a direct or total percentage of 50% or more of a subsidiary of the following type: industrial companies, banks and financial companies, insurance companies, private equity firms, mutual & pension funds / nominees / trusts / trustees, foundations / research institutes.

Step 3: Activity

- 11 The third step in our search process was to identify potential comparable companies engaged in service activities. We used NACE Code³ search strategies to identify companies engaged in these activities. Therefore, we identified all the companies in the database reporting a NACE Code⁴ which relates, or could relate to service activities.
- 12 This systematic search resulted in a sample of companies which have been exported to Excel for further analysis, as described by the following steps.

(ii) Various additional steps in the search process

Step 4: Turnover test

- 13 Companies were rejected which failed to report a turnover of at least 1 million EUR.

Step 5: Intangible assets test

- 14 To ensure that the comparable companies do not hold a material level of intangible assets, the companies were rejected if they reported a ratio of intangible assets over total assets exceeding more than 5%.

Step 6: Sufficient data test

³ With the Nace Code, we refer to the use of the Nace Code Rev 1.1. in the AMADEUS database.

⁴ NACE is "Nomenclature générale des activités économiques dans les Communautés Européennes", the pan-European industry classification codes.

15 Companies were rejected which failed to report financial data in at least 3 out of 9 years. In the case at hand, the years under review are 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006 and 2007. We eliminated these companies for two reasons:

- First, where companies fail to report consistently each year, the data they supply may be unreliable.
- Second, the use of multiple year data takes into account the cyclical nature of businesses. The OECD Guidelines recognize the importance of using multiple years' data when determining an arm's length range of results.

Step 7: Extreme results exclusion

16 Companies were rejected which reported a sum of total operating income over the 1999 through 2007 period greater than the sum of total costs over the same full period. In addition, companies were rejected which reported total operating losses over the 1999 through 2007 period greater than the sum of total costs over the same full period. In other words, companies reporting total 1999 through 2007 Full Cost Markups of either less than negative 100 percent or greater than 100 percent were eliminated from our sample.

17 As a result of these tests, we found a set of 9026 independent service providers which with to conduct our analyses.