

INDUSTRY BETAS

LEVERED AND UNLEVERED

64 INDUSTRIES

147 SUB-INDUSTRIES

10 GEOGRAPHICAL AREAS (USA + 9)

I QUARTER 2024



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- 64 INDUSTRIES
- 147 SUB INDUSTRIES
- 10 GEOGRAPHICAL AREAS

This quarterly research on industry and sub-industry betas
has been prepared by

salvidio & partners

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I – DESCRIPTION OF METHOD USED

1. About industry and sub-industry betas reported in this publication

Tables in Sections III and IV of this research list, *levered* and *unlevered industry* and *sub-industry* betas¹, are estimated on the basis of individual betas of shares issued by thousands of companies quoted on stock exchanges worldwide². Industry betas have been calculated as arithmetic averages of individual betas. They have been aggregated by industry or by sub-industry, as well as by different geographical areas³.

Industry betas can be useful when estimating the cost of capital because they tend to be less sensitive to errors that may affect the calculation of individual betas:

- as a consequence of special market situations or of other extraordinary events involving underlying companies, the results of individual beta calculation may be sometimes over- or underestimated;
- since industry betas are determined as averages of individual stock betas, over- and underestimations tend to compensate each other.

An average (industry or sub-industry) beta can, therefore, be generally considered to be more meaningful for the purpose of cost of capital calculation than its underlying single stock betas, considered individually.

2. Selection of individual betas

In order to estimate industry betas, we have averaged individual betas of listed companies:

- having a minimum market capitalization of 50 million Euros in the last five years;

¹ For a more plain reading on this note, we will, hereinafter recall both industry and sub-industry betas collectively as “industry betas”, unless a distinct reference to sub-industry betas is required for a better understanding of methodology and content of this research.

² Our estimates are based on industry, stock market and financial data provided by Standard & Poor’s Capital IQ

³ We have calculated an average “global” value of each industry and each sub-industry of the individual betas. In addition, the tables in Section III and IV feature also specific “regional” average values for the following areas: a) International edition of this booklet: *European Union and Western Europe, Russia and Eastern Europe, Southern and Eastern Mediterranean Countries, States of the Persian Gulf, Sub-Saharan Africa, Central and South Asia, East Asia, Pacific States, South America, North America*; b) USA edition of this booklet: *United States of America, Canada, Central and South America, European Union and other Western European countries, Russia and other Eastern European countries, Southern and Eastern Mediterranean and Gulf countries, Sub-Saharan Africa Central and South Asia, East Asia. Oceania and Pacific.*

- whose shares daily traded value was never less than one hundredth of their average market capitalization in the last five years.

In our opinion, the requirements above constitute a reasonable compromise between:

- the need to collect a vast number of individual betas to be able to calculate as many industry and sub-industry betas as possible;
- the necessity to avoid companies that are too small and/or whose shares may be thinly traded, since their individual betas may be not meaningful.

3. Estimating individual *levered* betas

For each company selected we have estimated a set of two *levered* betas:

- *calculation technique*: regression of return of company shares to market return, applied over two distinctive periods of five and of two years considering, respectively, monthly and weekly returns;
- *market return*: we have assumed as a proxy the return of the local stock market index of reference for the underlying company.

Individual *levered* betas calculated over a regression period of five years appear, generally, to be less dispersed around the market beta than those of a regression period of two years. The latter, due to the shorter regression period, may show results that are more affected by the volatility of the underlying shares return against the index return, but also better reflect the underlying company's recent operating financial risk profiles.

4. Estimating individual *unlevered* betas

Based on their *levered* betas, we have calculated *unlevered* betas of all companies different than those belonging to financial industries (banks and insurances).

We have estimated *unlevered* betas using two different techniques, depending on whether the underlying company's gross debt less "cash⁴ and equivalents" is greater than (net debt) or lower than (net liquidity) zero.

⁴ Amount of liquidity has been adjusted to properly reflect s.c. "working cash". See T. Coller, M. Goedhart, D. Wessels *Valuation*, Wiley, 2010, pag. 143