

LEVERED AND UNLEVERED

147 SUB-INDUSTRIES

10 GEOGRAPHICAL AREAS

IV QUARTER 2023



INDUSTRY BETAS LEVERED AND UNLEVERED

- 64 INDUSTRIES
- 147 SUB INDUSTRIES
- 10 GEOGRAPHICAL AREAS

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

salvidio & partners

VALUATION OF BUSINESSES AND INTANGIBLES
CHARTERED ACCOUNTANTS AND AUDITORS

Salvidio & Partners is a firm of chartered accountants and auditors specialised in economic and financial analyses for valuations and litigation. We act as counsels to entrepreneurs, corporations and law firms, as well as to other auditors and accounting firms. Our clients require our assistance in case of:

- acquisitions, mergers
- litigation, arbitration and mediation
- valuation of businesses, business interests, intangible assets
- auditing and due diligences
- impairment test of intangible assets and goodwill
- assessment of fair value of financial assets
- crisis management and insolvency
- financial planning and capital budgeting
- forensic accounting and expert witness testimonies
- transfer pricing

Salvidio & Partners Ltd.
Chartered Accountants and Auditors

I-00197 Roma - Via Antonio Gramsci, 9
Tel: +39.06.3610885 Fax: + 39.06.3236476
www.salvidio.com
info@salvidio.com

UK SW1Y 4LB London - 11-12 St. James's Square, Suite 1, 3rd Fl.

Management's credentials and affiliations:



Table of contents

I – DESCRIPTION OF METHOD USED	5
1. <i>About industry and sub-industry betas reported in this publication</i>	7
2. <i>Selection of individual betas</i>	7
3. <i>Estimating individual levered betas</i>	8
4. <i>Estimating individual unlevered betas</i>	8
4.1. Unlevered Beta – Net debt	9
4.2. Unlevered Beta – Net liquidity.....	9
5. <i>From individual betas to industry betas</i>	10
5.1. Filtering out outliers and meaningless values.....	10
5.2. More about the unlevering of individual betas	11
5.2.1. Industry betas “net liquidity included”	11
5.2.2. Industry betas “net liquidity excluded”	11
6. <i>Definitions and data tables</i>	11
6.1. Differences between editions of this research	11
6.2. Content of Sections II, III and IV	12
6.3. Summary table	13
6.4. Industry and sub-industry betas tables.....	14
6.5. Beta distribution by geographical zone	15
II –INDUSTRIES AND SUB-INDUSTRIES DEFINITIONS	17
III – INDUSTRY BETAS.....	37
IV – SUB-INDUSTRY BETAS.....	73

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 Sections 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.*