Pangaea

EQUITY - SPAIN
Sector: Biotechnology - Medical Research

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Pangaea Oncology (PANG) is a small Spanish biotech company (Zaragoza), specialising in differentiated cancer diagnosis and treatment and corporate services (molecular diagnostics and biomarker discovery for the pharmaceutical industry). It is run by a prestigious medical team that includes its founders (c.25% of capital). The Solans family (Grupo Pikolin; c.30%), its reference shareholder.

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The keystone is the rate of expansion of liquid biopsies

AN ORGANIC GROWTH STRATEGY (CAGR +14.2% -5Y), underpinned by a mixed and complementary business model: 1) precision clinical care in oncology (69.1% of consolidated revenue), and 2) molecular diagnostics in oncology services provided to companies (30.1%).

R+D IS KEY… it has made PANG a leading partner for the pharmaceutical industry in liquid biopsy. R+D is centralised in the molecular diagnostics laboratory, underpinned by a medical and scientific team headed by its founders (who are renowned within the national and international sector).

…ALTHOUGH DIFFICULT TO MANAGE. Some c. EUR 13Mn have been invested -5y, shaping the P/L and consumption of operating cash (>10y) with the company being "forced" to redirect its R+D strategy while keeping a "call" on the investment made.

BEING ABLE TO COUNT ON, TO DATE, THE BACKING OF SHAREHOLDERS: EUR 10.1Mn in capital increases -2y, with c. 60% allocated to offset credit balances (with related parties), enabling PANG to maintain its ND/Equity ratio <1x (2019).

FAVOURABLE MOMENTUM (COVID) THAT WILL DRIVE THE BUSINESS IN THE MID TERM. Taking advantage of the business opportunity provided by the current health care situation, resulting in an acceleration of growth (CAGR +25.7% in revenues +2y).

TAKING REC. EBITDA AND NP TO BREAK-EVEN IN 2021e…, in a scenario that will increase ROE to 11.1% +2y (vs. c. 15% offered by part of the sector).

… AND POSITIVE REC. FCF (2021E) AFTER > 10Y BURNING CASH. Rec. FCF yield c. 3% (in line with the sector), but very sensitive to the impact of milestone payments.

BUT IN THE LONG TERM EVERYTHING HINGES ON THE RATE OF EXPANSION OF THE LIQUID BIOPSY MARKET, which is yet to take off (valued at USD 1.5Bn 2019), and which offers significant growth potential (c. >20Bn in the very long term). On paper, PANG's play on liquid biopsy as a winning technology in oncology is the right one. Now, with a consistent business model, and favourable earnings momentum due to Covid (2020 – 2022), the keystone is the rate of expansion of liquid biopsies. This has been slow to date but should pick up speed with an immediate impact, due to economies of scale, on growth and profitability.

Market Data

Market Cap (Mn EUR and USD)	26.7	31.2
EV (Mn EUR and USD) (1)	29.3	34.4
Shares Outstanding (Mn)	16.9	
-12m (Max/Med/Mín EUR)	1.70 / 1.36 / 0.97	
Daily Avg volume (-12m Mn EUR)	n.m.	
Rotation(2)	6.3	
Thomson Reuters / Bloomberg	PANGO.MC / PANG SM	
Close fiscal year	31-Dec	

Shareholders Structure (%)(6)

Solans Family (Pikolin Group)	31.3
Founders	25.9
GPI (Domínguez Family, Mayoral)	14.1
Vidaro Inv. (Villagrá Blanco Family)	6.6
Free Float	22.2

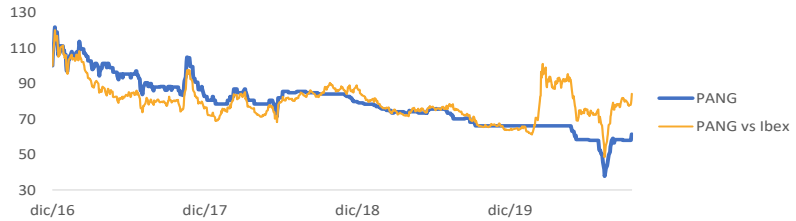
Financials (Mn EUR)	2019	2020e	2021e	2022e
Adj. nº shares (Mn)	15.0	16.9	16.9	16.9
Total Revenues	3.3	4.7	6.7	7.4
Rec. EBITDA	-1.7	-0.3	0.8	1.2
% growth	*25.3*	*81.9*	*361.2*	*46.9*
% Rec. EBITDA/Rev.	*n.a.*	*n.a.*	*12.3*	*16.3*
% Inc. EBITDA sector(3)	*-20.0*	*-1.2*	*1.3*	*15.4*
Net Profit	-4.8	0.1	0.7	1.1
EPS (EUR)	-0.32	0.00	0.04	0.06
% growth	*-286.4*	*101.1*	*n.a.*	*48.9*
Ord. EPS (EUR)	-0.33	-0.02	0.04	0.06
% growth	*-109.5*	*94.7*	*316.3*	*55.1*
Rec. Free Cash Flow(4)	-1.9	-0.5	0.8	1.0
Pay-out (%)	*0.0*	*0.0*	*0.0*	*0.0*
DPS (EUR)	0.00	0.00	0.00	0.00
Net financial debt	5.5	5.9	5.0	3.9
ND/Rec. EBITDA (x)	n.a.	n.a.	6.0	3.2
ROE (%)	*n.a.*	*0.7*	*8.2*	*11.1*
ROCE (%)(4)	*n.a.*	*1.4*	*5.8*	*8.2*

Ratios & Multiples (x)(5)

P/E	n.a.	n.a.	37.4	25.1
Ord. P/E	n.a.	n.a.	41.6	26.8
P/BV	3.2	3.2	2.9	2.6
Dividend Yield (%)	*0.0*	*0.0*	*0.0*	*0.0*
EV/Sales	8.85	6.24	4.37	3.95
EV/Rec. EBITDA	n.a.	n.a.	35.6	24.2
EV/EBIT	n.a.	n.a.	32.3	23.2
FCF Yield (%)(4)	*n.a.*	*n.a.*	*3.0*	*3.7*

(1) Please refer to Appendix 3.
(2) Rotation is the % of the capitalisation traded - 12m.
(3) Sector: TR Europe Biotechnology & Medical Research.
(4) Please see Anex 2 for the theoretical tax rate (ROCE) and recurrent FCF calculation.
(5) Multiples and ratios calculated over prices at the date of this report.
(6) Founders: Topgenetics (Dr. Rafael Rosell Costa) 9.9%, BIOsense (Javier Rivela Rodríguez) 8.9%, Biolifepat (Dr. Santiago Ramón y Cajal Agüeras) 3.5%, Maectorax (Dr. José Antonio Maestre Alcácer) 3.5%

Relative performance -5y (Base 100)



Stock performance (%)	-1m	-3m	-12m	YTD	-3Y	-5Y
Absolute	5.3	6.0	-7.1	-7.1	-30.0	n.a.
vs Ibex 35	8.7	16.5	27.6	30.2	5.3	n.a.
vs Ibex Small Cap Index	7.9	1.8	-6.5	-3.4	-40.4	n.a.
vs Eurostoxx 50	9.9	12.2	4.8	9.0	-21.0	n.a.
vs Sector benchmark(3)	3.1	7.4	-39.2	-30.8	-61.2	n.a.

(*) Unless otherwise indicated, all the information contained in this report is based on: The Company, Thomson Reuters and Lighthouse

Pangaea Oncology (PANG) is a BME Growth company

BME Growth is the segment of BME MTF Equity aimed at small and medium sized companies, directed and managed by the Spanish stock market and is subject to the CNMV supervision. BME MTF Equity is not a Regulated Market but instead falls within the classification of a Multilateral Trading Facility (MTF) as defined under the Markets in Financial Instruments Directive (MiFID). In July 2020, BME Growth obtained the status of SME Growth Market, a new category of EU regulations, which in Spain is called Mercado de Pymes en Expansión.

BME Growth is the Spanish equity market for companies of reduced capitalization which aim to grow, with a special set of regulations, designed specifically for them, and with costs and process tailored to their particular features. Operations in BME Growth (former MAB) started in July 2009. There are currently c.120 companies listed on it. Companies listed on the MAB can choose to present their financial statements under IFRS or the General Accounting Plan (PGC) and Royal Decree 1159/2010 (NOFCAC).

The opportunity for growth in liquid biopsy. But, at what speed?

PANG is a story of positioning in precision personalised medicine and a pioneer (local market) in liquid biopsy (in expansion). What can be expected of the company in the mid and long term?

A) 2015 -2019: organic growth (endorsing its business) and rationalisation of R+D

Mixed business model positioned in liquid biopsy

PANG's research vocation is underpinned by a mixed business model aimed at a growing market unaffected by the cycle (oncology). PANG has based its growth strategy on the complementary nature of two business lines that feed off each other: 1) precision clinical care in oncology (profitable, 69.1% of consolidated revenue; CAGR -5y: 23.5%), and 2) molecular diagnostics in oncology services provided to companies (30.1% of group revenues; CAGR -5y: 1.6%), centred on the company's state-of-the-art molecular diagnostics laboratory (its differentiating asset; with proprietary technology).

Leading partner for the pharmaceutical industry

Its specialisation in liquid biopsy has made PANG a key partner for the pharmaceutical industry, for which it provides the following services: 1) a central laboratory for molecular diagnostics (pharmacogenomics), 2) testing of third party medicines in cell lines (200 cell lines in cancer, c. +2x vs. 2016), 3) validation of diagnostics platforms and 4) design and validation of biomarkers.

This strategy has resulted in an "organic" CAGR of +14.2% -5y, vs a sector that has opted mainly for inorganic growth. PANG started out on the basis of clinical care agreements in oncology and molecular pathology with private hospitals (Dexeus, 2007). Since 2016, when it was first listed, the company has:

Revenue: CAGR -5y +14.2% with improvement in activity indicators

1) Enlarged its footprint in the hospital market: an additional 4 hospitals belonging to the QuirónSalud Group (a strategic client and the main lever of growth in clinical care services).
2) Gradually improved its activity indicators (CAGR -5y +36% in clinical visits), reaching a c. 10% market share in Catalonia (2019e), diversifying its client portfolio (it currently has >80 clients, vs. <30 in 2016).
3) Consolidated its scientific capacity, renewing its portfolio of contracts with the pharmaceutical industry (client recurrence > 50%).

R+D being critical to its strategy… necessary to attract and retain medical/scientific talent, in a situation of a lack of specialists. This is centralised in its laboratory, underpinned by a multi-disciplinary medical and scientific team led by the company's founders (Dr. Rafael Rosell, Dr. Santiago Ramón y Cajal and Dr. José Antonio Maestre) who are renowned within the sector (national and international).

c. EUR 13Mn in R+D -5y
EUR -13.9Mn cumulative Rec. EBITDA -5y

...But difficult to manage (it has shaped the P/L and consumption of operating cash for >10y). PANG has invested a total of EUR 13.0Mn on research -5y (c. 50% allocated to the development of drugs, together with its UK partner CRT), which has absorbed the profitability generated by its clinical care business line (accumulating EUR -13.9Mn in consolidated Rec. EBITDA -5y).

Being "forced" to redirect its R+D strategy…, and maintaining a "call" on the investment made to date. The demanding level of investment required to develop medicines forced PANG to discontinue investment in these lines of research (with an impact of EUR -2.5Mn on the P/L in 2019 due to impairments). However, PANG maintains 46% of the ownership of the development programme with CRT for its potential licencing without the need for additional investment.

c. ND/Equity <1x post EUR 10.1Mn in capital increases (-2y)

Having managed to keep its ND/Equity ratio <1x, thanks to two capital increases carried out -2y (EUR 10.1Mn), with c. 60% of the increase in capital being used to offset credit balances (with related parties). In 2019 ND was EUR 5.5Mn, with c. 30% of gross debt associated with core shareholders.

B) 2020-2022e, a favourable backdrop that should drive the business: due to COVID (m/t) and growth in the liquid biopsy market (l/t)

Well positioned to exploit market potential

The business model revolves around a virtuous circle to exploit the market's potential. A distinctive business model based on the full integration of its molecular biology laboratory team (specialising in liquid biopsy) with its clinical care team, resulting in the generation of R+D oncology projects with which to feed the pharmaceutical industry.

Consolidated revenues: CAGR +25.7%+ 2y boosted by the Covid-19 crisis

Acceleration of revenue growth (CAGR +25.7% +2y) boosted by COVID ... Our estimates envisage an acceleration of revenue growth (m/t) to EUR 7.4Mn in 2022e (> +2x vs. -3y; CAGR +25.7% +2y) underpinned by: 1) the expansion of the clinical care business (greater hospital penetration; CAGR +7.6% +2y), 2) the broadening of the corporate services contract portfolio and 3) its diversification via the incorporation of business lines associated with the management of Covid-19 (production and diagnosis of PCRs, quick tests, R+D unit).

Corporate services: Mid-term growth driver (Revenue CAGR +44.1%+ 2y)

...Which is emerging as a business opportunity, boosting the corporate services area in the mid term. PANG has exploited its know-how and the current health care situation to: 1) create an R+D unit for the generation and search for biomarkers that predict the clinical outcome of Covid-19 patients, 2) increase its diagnostic capacity, incorporating a new production and diagnostic chain for PCRs, fast antibody tests and ELISA for Covid-19 that will be reinforced in the short term with the marketing of antigen tests and 3) create a pre-clinical services unit in COVID (pharmaceutical industry). Revenues associated with COVID will contribute c. 60% of this division's revenue +2y (CAGR +44.1% +2y).

And backed by a favourable news flow enhancing business visibility. PANG has been especially active since the pandemic broke out, the diversification of its business towards COVID being accompanied by the announcement of contracts in this area (PharmaMar, In3BIO).

Reaching break-even in Rec. EBITDA and NP (2021e)

Taking Rec. EBITDA and NP to break-even in 2021e. As a result of: 1) the increase in turnover, 2) the rationalisation of R+D (EUR 1.8Mn 2020e, -20.0% y/y), which will trend towards c. 20% of revenue +2y (in line with the sector) and 3) a tax rate <10% in the mid term (EUR 3.1Mn in 2019 tax loss carryforwards). This scenario would take ROE to c. 11.1% +2y (in the absence of further capital increases) vs. losses for peers and the c. 15% offered by companies that sell advanced medical equipment.

And positive Rec. FCF (EUR 0.8Mn 2021e)

and generating positive FCF in the same year, after > 10y burning cash. With investment on R+D being the item that will most continue to impact PANG's FCF in the mid term. We envisage EUR 0.8Mn in Rec. FCF 2021e, with a Rec. FCF yield of c. 3% (in line with the sector). However, the performance will be highly sensitive, among other factors, to the potential collection of additional contract milestone payments for the provision of services.

Gradual reduction of debt (from 2021e)

Although with what in principle is high debt but that (to date) has benefited from sponsorship. c. 20% of debt is subsidised (by the CDTI or The Centre for the Development of Industrial Technology), with 30% being associated with the majority shareholder (the Solans family; 33.1% of capital). The latter have in the past repeatedly provided funding, which to a large extent has been capitalised (EUR 8.5Mn in 2016-2019, c. 50% of the capital increases carried out in that period). Cash generation from 2021e and the potential support of its shareholders will allow the company to deal with debt maturities (c. 30% of debt falls due > 2022).

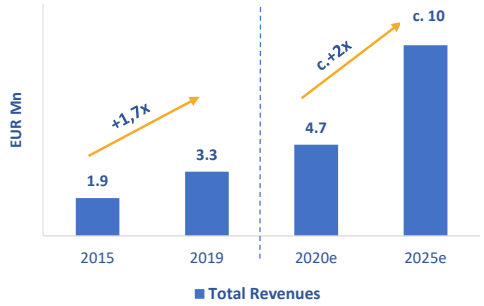
A) But, what can we expect from PANG in the very long term?

PANG has specialised in the liquid biopsy segment, where it seeks to position itself as a European leader in cancer diagnosis and treatment. This still dormant market (valued at USD 1.5Bn 2019) offers significant growth potential (c. +20Bn in the very long term), especially in mass sequencing (NGS; a technology its laboratory possesses).

Positioned in a market (liquid biopsy) with long-term growth potential

The technical advances in liquid biopsy and the growing scientific evidence regarding its efficacy and pharmacoeconomic benefits (cheapening of its cost against a backdrop of increasing healthcare spending), will underpin market growth (favouring the penetration of its clinical use), driving PANG's revenues in the longer term. Accordingly, it is logical to think that its molecular diagnostics business line will lead growth in group revenues in the longer term, with these doubling +5y.

Chart 1. Theoretical l/t revenue performance



And potential for improvement in profitability in the long term.

This "snapshot" cannot be captured in growth companies like Pangaea using a DCF valuation based on mid-term estimates. Perhaps the greatest uncertainty revolves around the rate/speed of penetration of liquid biopsy in clinical practice and its final impact on the group's P/L.

Moreover, PANG holds rights to the potential licencing (in the long term) of some of the medicines developed (until 2018) in conjunction with its UK partner CRT, which would fully impact the group's P/L. In addition, it would be feasible for PANG to lever on its know-how to enter into new alliances in the long term with partners (financial/industrial) that enable it to reposition itself in the development of medicines, without negatively impacting the P/L.

In a sector immersed in M&A

Besides, M&A frenzy in the liquid biopsy segment should continue in the mid to long term as a way of achieving growth in the sector. In this respect, we do not rule out PANG being involved in sector concentration movements (passively or actively, in growth areas, if it has the financial muscle required to do so).

Opportunity vs speed. PANG's equity story today is based on 4 factors of which 3 already seem to have been validated and endorsed:

1) A business model focused on growth. A commitment to a technology (liquid biopsy) with rational expectations for high growth. And credible revenue synergies between the two business areas. Logic points to high growth in the long term.
2) Momentum: The Covid-19 crisis and PANG's quick response to the opportunity that this represents in terms of the diagnostics business. CAGR for revenues of c.+25% until 2022. Reaching break-even already in 2021.
3) The balance sheet. Understood as the capacity to finance expected growth. High level of debt, but: 1) gradual reduction from 2021, 2) a historical commitment of core shareholders, and 3) effective agreements to contain the R+D "bill".

The keystone is the speed of expansion of liquid biopsy

In other words, on paper, PANG is at the right place at the right time. There is just one thing missing: the speed. The speed at which the penetration of liquid biopsy as a technology grows. This factor has played against the company until 2020 and is the only remaining question mark surrounding a very clear equity story. It's true that, as in any business, there are other risks, but this, the speed of the expansion of an apparently winning technology, is the keystone of PANG's equity story.

Business description

At the forefront of precision oncology (personalised medicine)

Pangaea Oncology (PANG) is a small company (EUR 26.7Mn Market Cap), based in Zaragoza (pre-2017 in Barcelona), that provides medical services of precision oncology (based on human genetics). Created in 2006, it has traded (since 2016) on the BME Growth market (formerly the Mercado Alternativo Bursátil, MAB).

PANG offers distinctive oncological diagnostic and treatment services (personalised medicine), via two inter-related and complementary business lines: 1) Clinical care, through its subsidiary (100%) Instituto Oncológico Doctor Rosell (IOR; market share of c. 10% in Catalonia) and 2) corporate services (mainly oncological molecular diagnostics, underpinned by a multi-disciplinary medical and scientific team led by the company's founders (Dr. Rafael Rosell, Dr. Santiago Ramón y Cajal and Dr. José Antonio Maestre) and a state-of-the-art molecular diagnostics laboratory using proprietary technology. Its principal differentiation lies in the full integration of the molecular biology laboratory team with the clinical care medical team, resulting in therapeutic improvements for its patients. In addition, the circular relationship that exists in its business generates R+D ideas in oncology for the pharmaceutical industry, resulting in new revenue sources in the long term.

With a prestigious management team (medical and scientific)

The founders of PANG are fully involved in the management of the group. IOR's oncological service is headed by Dr. Rafael Rosell[1] (an international authority on lung cancer), director of the oncology services of the hospitals with which PANG collaborates. IOR has a team of oncologists specialising in the main kinds of cancer (a disease with growing incidence), backed by a team of surgeons, led by Dr. José Antonio Maestre, of renowned international prestige (thoracic surgery).

Chart 2. Consolidated Revenues (PANG)

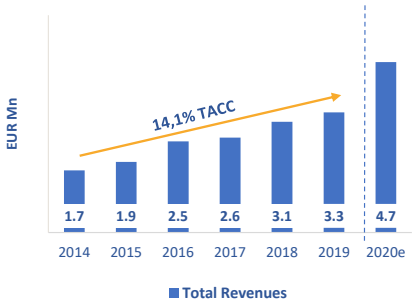
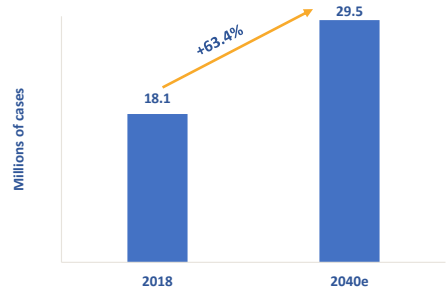
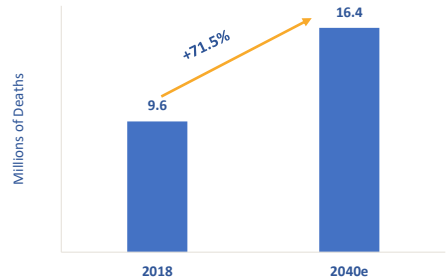


Chart 3. Global cancer incidence



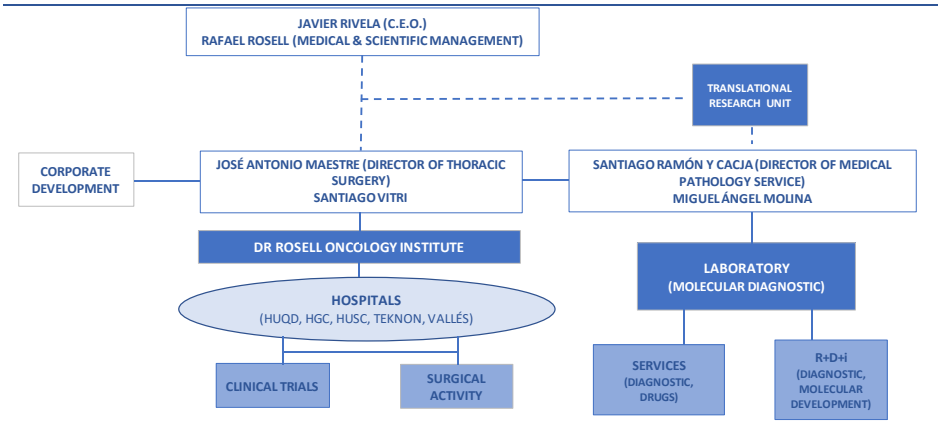
Source: Sociedad Española de Oncología Médica (Spanish Society of Medical Oncology), Cancer figures in Spain 2020

Chart 5. Global deaths associated with oncological diseases



Source: Sociedad Española de Oncología Médica (Spanish Society of Medical Oncology), Cancer figures in Spain 2020

Chart 4. Corporate and operational structure



In addition, the molecular pathology area (critical to patient treatment) is headed by Dr. Santiago Ramón y Cajal[2], who belongs to a prestigious dynasty of doctors and scientists (national/international). The complementary nature of the two business lines and the multi-disciplinary team (highly qualified and specialised technicians, biologists and pathologists) on which PANG's strategy is underpinned, seeks to maximise the quality and efficacy of patient treatment through personalisation.

Positioned in a growing market (oncology)…

Cancer, whose growing incidence reached c. 18Mn cases diagnosed worldwide in 2018, remains one of the leading causes of death globally. That year, c. 9.6Mn deaths associated with oncological disease were registered, a figure that is set to rise over the long term. Lung cancer

[1] Acknowledged by the Lancet as Europe's leading specialist in lung cancer, he is, among others, a member of the scientific committee of the Spanish Lung Cancer Group (*Comité Científico del Grupo Español de Cáncer de Pulmón* or GECP) of which he is a founder and chairman, and a member of the founding board of the European Thoracic Oncology Platform.

[2] Head of the Pathological Anatomy Department at the Vall d'Hebron hospital (Barcelona), Professor of Pathological Anatomy at the Universidad Autónoma of Barcelona, and an Academic Fellow of the Real Academia Nacional de Medicina (Royal Academy of Medicine).

is the most lethal form, being responsible for 18.4% of deaths from tumours, followed by colorectal cancer (9.2%) and cancer of the stomach and liver (8.2% respectively). Given this situation, global oncology spending looks set to continue to increase (CAGR +3y: 9-12%) reaching c. USD 240Bn in 2023e[3].

…And specialising in state-of-the-art precision medicine (liquid biopsy)

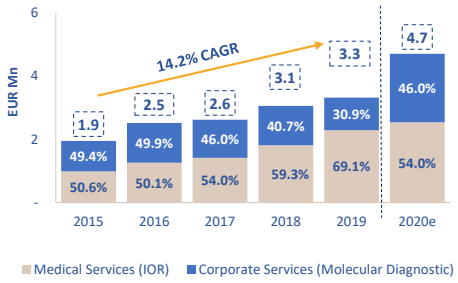
PANG started out on the basis of clinical care agreements in oncology and molecular pathology with private hospitals (Dexeus, 2007), which have given it access to Grupo Quirón (a strategic client and the main lever of business growth).

The group currently has two complementary business areas focusing on oncological pathologies: 1) integrated medical care management and 2) molecular diagnostics, backed by state-of-the-art technology in the field of molecular biology (specialised in liquid biopsies). Group revenues have grown c. 70% vs. -5y (EUR 3.3Mn 2019; 14.2% CAGR).

Liquid biopsy is emerging as an alternative to tissue biopsy (an invasive technique generally used in cancer diagnosis) as one of the most advanced non-invasive techniques for detecting tumour cells that are circulating[4] in liquid samples taken from the patient (blood, urine, bone marrow or cerebrospinal fluid).

The year it made its debut on the stock market (2016) the FDA approved the first liquid biopsy test[5], with everything looking favourable for the market potential offered by this innovative technique (c. +USD 20Bn +5y)[6]. However, the initial scarcity of clinical evidence for its efficacy, together with the lack of standardisation of existing techniques (reducing their cost), has slowed penetration. Nevertheless, the publication of a host of scientific reports in recent years backs the growth of this market.

Chart 6. Contribution to revenue by business line



Integrated and distinctive clinical care management: personalised oncological medicine

Offered by its subsidiary IOR, specialising, to date, in oncology (especially lung cancer). Currently, IOR provides its services to 5 private hospitals (in Catalonia)[7], of the 52 that comprise Grupo Quirónsalud (acquired in 2017 by the German giant Fresenius). Patients are given integrated oncological treatments (medical services and clinical and therapeutic treatments), underpinned by therapy models based on innovative genetic diagnosis techniques. This business line has been the main growth driver, accounting for 69.1% of group revenue in 2019 (CAGR -5y: +23.5%), and is the main source of cash generation.

IOR offers its patients (of insurers and private patients) medical testing, molecular diagnostics and surgical services. In addition, the fact that PANG is renowned in the pharmaceutical industry allows the patients of IOR to have access to innovative therapies and to take part in clinical trials of new medicines. PANG currently has 88 ongoing trials for global pharmaceutical companies.

The business structure allows for growth in consolidated revenues to be levered on the cross selling of services. The medical care of IOR's patients in turn generates molecular biology analysis activities carried out in its laboratory (c. 10% of IOR's 2019 revenue), whose aim is to personalise oncological treatment according to the genetic characteristics of the pathology (improving its quality, speed and efficacy).

Corporate services (oncology) a mid-term growth driver…

PANG provides molecular diagnostics (c. 50% of this business line's revenues) and biomarker discovery services. Revenue from corporate services, which have remained stable -5y, accounted for 30.9% of consolidated revenue in 2019 (EUR 1.0Mn). Molecular diagnostics is a technique that combines laboratory tests with the precision of molecular biology to identify and analyse biomarkers in the genome and proteome (the genetic code and its expression as

[3] IQVIA Institute: 2019 report on trends in oncology.

[4] Circulating tumour DNA (ctDNA), microRNA (miRNA) and circulating tumour cells (CTCs).

[5] Cobas EGFR: mutation test (circulating tumour DNA) used to detect genetic mutation in patients with lung cancer.

[6] 2015 JP Morgan report on liquid biopsy.

[7] Since 2007 in the Hospital Universitario Quirón Dexeus (HUQD) and since 2016 in the Hospital General de Catalunya (HGC), el Hospital Universitario Sagrado Corazón (HUSC) and el Centro Médico. In November 2019 it broadened its services to Clínica del Vallés, with a zero contribution to date.

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proteins). The progress being made in this field (speed, precision and cost-benefit pharmacoeconomic improvements) is revolutionising clinical diagnostics.

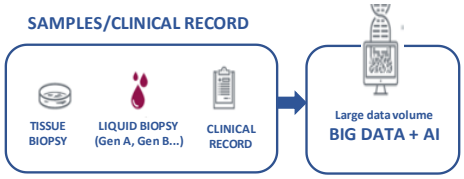
Activity is based around its state-of-the-art pharmacogenetics in molecular biology laboratory, located at the Hospital Universitario Quirón Dexeus, one of Barcelona's most prestigious hospitals, where the company was based until 2017. The laboratory offers specific molecular diagnostics (according to the particular genetic markers that characterise the different kinds of tumour), personalising the treatments of IOR patients (personalised medicine).

…Based on a molecular biology laboratory (its distinctive asset)

Its laboratory was the first to receive the ENAC national accreditation [8] for pharmacogenomics (2009; oncological markers in tissue), for mutations in liquid biopsy (2016; serum/plasma) [9] and, most recently (April 2020), for multiplex diagnostic techniques (Next Generation Sequencing) in liquid biopsy[10].

PANG uses proprietary liquid biopsy technology to analyse mutations[11], enabling both the classification of the existence of the mutation and quantification of the level of this (the latter being critical in the monitoring of the development of a cancer). The company is continuing its research with the aim of extending the validation to additional genes.

Chart 7. Interest of the pharmaceutical industry in Big Data



Note: the medical services activity allows simultaneously to accumulate data of patients' clinical history.

Making it a leading partner for the pharmaceutical industry

In addition, PANG works with the pharmaceutical industry, for which it provides the following services: 1) a central laboratory for molecular diagnostics (pharmacogenomic services: screenings or TAP[12], for the inclusion of patients in clinical trials of medicines aimed at specific targets), 2) testing of third party medicines in cell lines (it has a bank of 200 cell lines[13] (c. +2x vs. 2016) for 15 different kinds of cancer, among others, lung, prostate, pancreas, colon, ovary, breast), 3) validations of diagnostic platforms for other companies developing commercial molecular diagnostic kits and that need to validate the effectiveness of these and 4) the design and validation of biomarkers[14] (R+D+i and consultancy services aimed at the genetic stratification of target populations [15] for their treatments/medicines, that raises the response to these treatments).

These services eventually lead to clinical trials in which IOR patients take part (with the two business lines covering the different parts of the value chain of clinical trials). By way of example, the recent contract signed with Roche for the development of phase Ib/II of the VENEZO Lung clinical trial (EUR 1.0Mn)[16]. The potential signing of new contracts with the industry in the short term will boost this business line.

Its client portfolio includes large international pharmaceutical companies (Roche, Astrazeneca, GlaxoSmithkline, Merck Serono, Boehringer Ingelheim), biotech companies (Amgen, Clovis Oncology, Oryzon and PharmaMar), companies specialising in diagnostic systems/platforms (Roche Molecular Systems, Qiagen, and, in the past, Thermo Fischer), clinical laboratories (Echevarne, etc.) and co-operative research groups (ETOP[17],…).

And benefiting from the current Covid-19 crisis

PANG has taken advantage of the current health crisis to create (May 2020) an R+D unit in its subsidiary IOR (backed by its know-how in liquid biopsy), for the generation and search for biomarkers (in biological fluids) that can predict the clinical evolution of Covid-19 patients. In addition, PANG has increased its diagnostic capacity, incorporating a new production and

8 Entidad Nacional de Acreditación (National Accreditation Agency).
9 Mutations in the EGFR, KRAS and BRAF genes. ISO certification 15189 nº750 / LE15156.
10 In accordance with ISO regulation 15189.
11 SOP09 (SOP: "standard operating procedure"): whose sensitivity ranges between 72% and 80% (depending on the gene) and with 100% specificity.
12 Testing awareness platforms.
13 Of the 200, 70 are medicine resistance models.
14 Algorithms of genetic alterations.
15 Drug profiling.
16 This is a Phase Ib/II study of Atezolizumab plus dendritic cell vaccine as maintenance treatment in patients with extensive-stage small cell lung cancer (SCLC), after induction treatment.
17 ETOP: European Thoracic Oncology Platform, a not-for-profit organisation established in Switzerland to promote the exchange of ideas and research on thoracic tumours to which over 50 associations and institutions from all over Europe belong.

Chart 8. R+D Investment

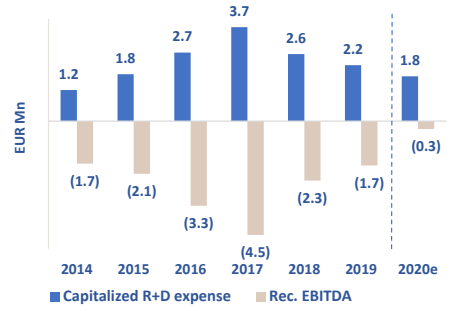


Chart 9. Net Debt vs. capital increases

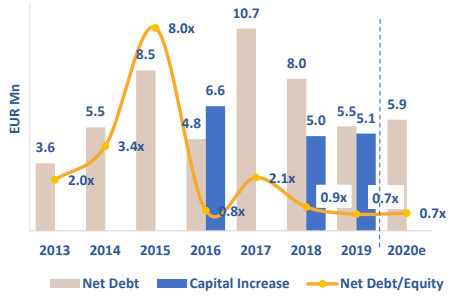
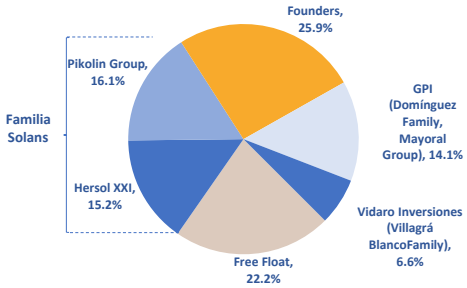


Chart 10. Shareholders



diagnostic chain for PCRs, fast antibody tests and ELISA[18] for Covid-19 (capacity > 180,000 tests annually) and creating a pre-clinical services unit in COVID for the pharmaceutical industry. In the short term PANG also hopes to start marketing antigen tests.

This change in business has been accompanied by the announcement of several contracts, such as the one signed with Spanish biotech company PharmaMar (pre-clinical trial with Aplidine applied to COVID19, which will be concluded in 2020) and with the UK multi-national In3BIO Ltd (EUR 1.0Mn; clinical study of its IN01 lung cancer vaccine, applied to COVID19).

Although it has been "forced" to redirect its medicine development strategy (R+D), holding a "call" on investment made to date

Given its nature, PANG has invested a total of EUR 13.0Mn on research -5y (c. 50% for the development of medicines). For this it has levered on a strategic agreement with Cancer Research Technology (CRT, UK; 2016), with whom it has synthesized >200 molecules[19] in order to take those with greatest potential through late phase pre-clinical trials for their subsequent out-licencing.

However, the demanding level of investment required to develop drugs, together with the need to strengthen its balance sheet, has led the company to change the direction of its R+D strategy. The company has managed to keep its ND/equity ratio <1x thanks to two capital increases carried out -2y (EUR 10.1Mn), with c. 60% of the increase in capital being used to offset credit balances (with related parties). In 2019 ND was EUR 5.5Mn, with c. 30% of gross debt with core shareholders.

In 2019 PANG suspended investment in the development of medicines with CRT, resulting in an impairment of the corresponding assets (with an impact of EUR -2.5Mn on the 2019 P/L). However, the changes made to the contract with CRT (2018) allow PANG to maintain 46% of the ownership of the programme for its potential licencing without the need for additional investment.

A stable and committed shareholder base

The shareholdings of the founding partners have gradually been diluted since the flotation. These currently hold 25.9% of capital (vs. 42% in 2016) through the companies Topgenetics S.L., BIOsense S.L., Biolifepat S.L. and Maectorax S.L.U., in which they have controlling stakes.

In addition, there are two core shareholders: the Solans family, which owns 31.3% of capital through two companies (Grupo Pikolín and Hersol XXI S.L.) and the Domínguez families (owners of Mayoral), through 14.1% of Global Portfolio Investments (GPI). The Solans family have in the past repeatedly provided the company with funding (loans granted through its companies Hersol XXI and Ebrosol Inversiones), which to a large extent has been capitalised (a cumulative total of EUR 8.5Mn in 2016-2019, c. 50% of the capital increases carried out in that period). As a result, its shareholding (at January 2020) had increased by 2.7p.p. since 2016, having fallen by -7.9p.p. since the beginning of this year (-6.6p.p. this October, in order to give the Villagrá Blanco family a stake in the company, through Vidaro Inversiones). The second core shareholder (the Domínguez family) has also increased its shareholding during the financing rounds carried out since 2018 (+8.5p.p. in the same period). The free-float is >20%.

In conclusion: What is PANG today? where is it heading?

Its origins (biotechnology) have shaped PANG's P/L and consumption of operating cash for >10y. "Cash is king" is a saying that acquires special relevance in the biotech universe. It is critical to attracting/retaining talent to develop the necessary R+D+i, in a sector where the generation of revenues from these developments can take a very long time (especially in the development of drugs).

PANG's research vocation is underpinned by a mixed business model aimed at a growing market (oncology), on the basis of two complementary divisions that feed off each other: 1) clinical care services in precision oncology (profitable, 69.1% of consolidated revenue; CAGR -5y: 23.5%;

[18] Analysis of IgM and IgG antibodies is carried out via the benchmark ELISA test.

[19] Development of New Chemical Entities, (NCEs) as part of the programme aimed at finding an inhibitor of PAK, a kinase protein associated with the development of ovarian, lung and breast cancer (among others), for which there are currently no treatments available on the market.

personalised medicine), and 2) molecular diagnostics in oncology services provided to companies (mainly in the pharmaceutical industry), centred on the company's state-of-the-art laboratory (specialising in liquid biopsy), in which it carries out R+D (30.1% of group revenues; CAGR -5y: 1.6%). In addition, PANG has a "call" on the investment in R+D carried out with its UK partner (CRT), which could impact the P/L in the longer term.

Although inorganic growth is the main way chosen by an especially competitive sector to accelerate business growth, PANG's growth has been purely organic (CAGR -5y: +14.2%). Over these years, PANG has managed to consolidate its scientific capacity (renewal of the portfolio of contracts with the pharmaceutical industry; >100 contracts, with client recurrence of > 50%), the improvement in its activity indicators (CAGR -5y +36% in clinical visits, which remain in double digits, +14.5% -2y) and the diversification of its client portfolio (currently with >80 clients vs. <30 in 2016).

The most significant being the virtuous circle that PANG has established as business model, which means it is well placed to take advantage of the market's potential

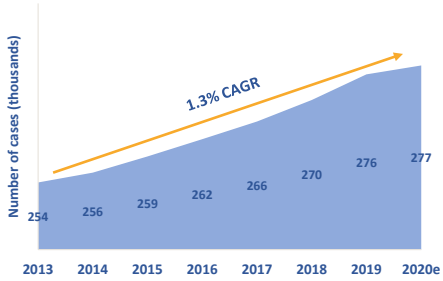
The company's distinctive business model is based on the full integration of its molecular biology laboratory team with its clinical care team, resulting in the generation of R+D oncology projects with which to nourish the pharmaceutical industry, and positioned in the growing market of liquid biopsy.

The company's scientific vocation has made PANG a domestic pioneer in this still fledging market segment. The advances being made in this technology and the growing scientific evidence regarding its efficacy and medicine-financial benefits (cheapening of its cost against a backdrop of increasing healthcare spending), will sustain market growth (acceleration of penetration in the clinical use of this technique). PANG has the know-how and the capacity to take advantage of market momentum in the mid/long term.

However, the biggest uncertainty lies in the rate/speed of penetration of this technique in clinical practice, and its eventual impact on the group's P/L.

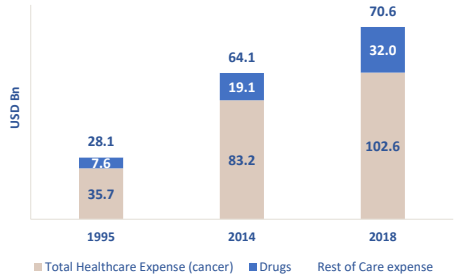
A paradigm shift in oncology towards personalised treatment: liquid biopsies, a market yet to take off

Chart 11. Cancer incidence (Spain)



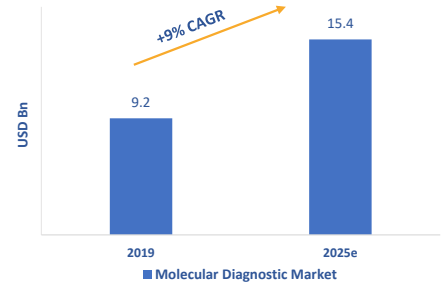
Source: Sociedad Española de Oncología Médica (Spanish Society of Medical Oncology), Cancer figures in Spain 2020

Chart 12. Cancer related healthcare expenditure in Europe



Source: The Cost of Cancer in Europe 2018 (European Journal of Cancer Vol.129); The cost and burden of cancer in the European Union 1995-2014 (European Journal of Cancer Vol.66)

Chart 13. Global Molecular Diagnostic market



Source: GrandView Research

Cancer (the therapeutical area in which PANG operates) is one of society's main health concerns globally. It is the second biggest cause of death (9.6Mn deaths in 2018 globally) and its incidence rate continues to increase. According to the WHO, in 2018 there were 18.1Mn new cases around the globe (c. +45% vs. -10y), with incidence likely to increase over the next two decades (c. +60%, 29.4Mn 2040e). In Spain, this disease accounted for c. 30% of total deaths in 2018[20], lung cancer being the most lethal form (c. 20% of cancer deaths). The forecast for 2020 is for c. 280,000 new cases diagnosed in Spain[21].

The cost of treating cancer in Europe has been rising (+13.8% CAGR -5y for spending on medicines). In Spain, the estimated total cost associated with cancer (direct/indirect) was c. EUR 19.3Bn in 2018 (c.1.6% of the GDP)[22], including direct healthcare costs of EUR 9.3Bn (vs. c. EUR 7Bn -3y)[23]. Spending is being impacted by new treatments and the growing awareness of the importance of early detection and by the lengthier treatment of diagnosed patients (higher survival rate due to the increase in alternative treatments in patients with recurrence).

Paradigm shift in oncology towards precision medicine

The trend in the oncology market is towards precision medicine: c. 50% of oncology medicines launched on the market in 2018 included predictive biomarkers[24] in their approved indications [25]. The use of biomarkers seeks to personalise treatment (improving efficacy), resulting in lower costs (by reducing recurrence).

On the other hand, precision medicine and biomarkers have made clinical trials more complex, with quantitative biomarkers and the tumour mutational load being critical in the drug approval process. In order to improve the productivity of the pharmaceutical industry's oncological pipeline (well below that of other diseases), the industry has adopted the strategy of screening patients for inclusion in its clinical trials (via genetic stratification). The use of tests with biomarkers in the trials results in a considerable improvement in productivity (c. +70%).

Molecular diagnostics: a growth market

Molecular diagnostics is a technique that combines laboratory tests with the precision of molecular biology to identify and analyse biomarkers in the genome and proteome [26], in order to identify a predisposition to a disease and its diagnosis. Progress in this area is revolutionising clinical diagnostics. Improvements (speed, precision) in the detection and specific quantification of genetic material in biological samples have been especially important in the treatment of infectious and oncological disease. Accordingly, molecular diagnostics has become a critical tool for clinical teams, resulting in benefits for the patient.

Its use has become increasingly common, replacing conventional testing in many areas of laboratory medicine (oncology, infectious diseases, clinical chemistry and clinical genetics, etc.). Various sources point to a global market value of c. USD 9Bn (c. 35% in the US) with an estimated CAGR of c. +9%, exceeding USD 15Bn +5y. The market is dominated by applications in infectious diseases (c. 45%), with c. 20% aimed at cancers.

The ageing population, together with a higher incidence of infectious and chronic diseases (especially in oncology) and a greater knowledge of the role played by genetics in disease, are

[20] Instituto Nacional de Estadística (National Statistics Institute).

[21] Sociedad Española de Oncología Médica (Spanish Medical Oncology Institute): 277,234 cases in 2019.

[22] The economic and social impact of cancer in Spain (Oliver Wyman, 2020).

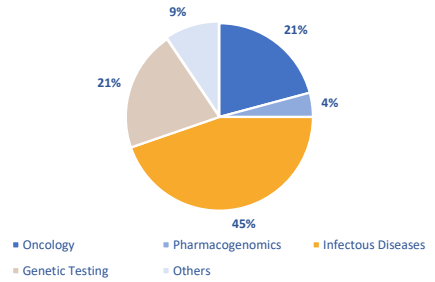
[23] "The burden of cancer in Spain", figures for 2015 (Bristol-Myers Squibb and Omakase Consulting).

[24] A substance used as an indicator of a biological state.

[25] Iqvia (Global Oncology Trends 2019).

[26] The genetic code expressed as proteins.

Chart 14. Global Molecular Diagnostic market by application



Source: GrandView Research

Chart 15. Comparison between liquid biopsy and standard biopsy

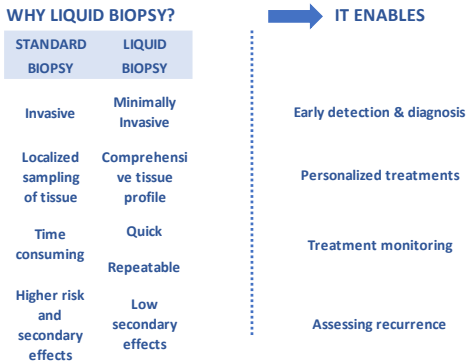
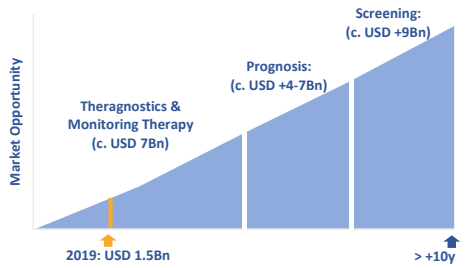


Chart 16. Liquid Biopsy market potential



Source: LH and JP Morgan "Liquid Biopsy" report (2015).
Note: Theragnostic is the patient care strategy that integrates diagnosis and therapy.

boosting the acceptance of personalised medicine (and the use of accompanying diagnostics), driving market growth. Pharmacogenetics and liquid biopsies are the main market trends.

Led by PCRs (in the limelight at present due to Covid-19) and next generation sequencing (NGS)

PCR tests[27] are the most widespread technology on the market and the main driver of its growth (thanks to technological improvements and their current use in the management of the Covid-19 pandemic). Sequencing will also see high growth (m/t). Technological advances and the gradual reduction in its cost will favour its use, especially in oncology, underpinned by the increased prevalence of this disease and the advantages of early diagnosis.

PCR tests are one of the tools being used to manage the current Covid-19 pandemic, boosting the P/Ls of the companies operating in this market segment (generating revenue of c. USD 1Bn in 2Q20 for Thermo Fischer, c. 75% of the company's consolidated turnover).

Liquid biopsies: at the forefront of precision medicine

A cancer diagnosis is mainly carried out via a biopsy of the tumour tissue (if the tumour or metastasis is accessible). This is an invasive technique that may have side effects (bleeding, inflammation, etc.).

As a cancer grows, the body undergoes changes, releasing biomarkers into the blood stream. Liquid biopsies are one of the most advanced non-invasive techniques in oncological diagnostics, detecting tumour cells that are circulating[28] in samples taken from the patient (blood, urine, bone marrow or cerebrospinal fluid). In addition to detecting the cancer in its early stages, this test helps to monitor the efficacy of the treatment by adapting this to the patient (precision personalised medicine).

An attractive but still fledgling market…

The main advantages of liquid biopsies over other cancer diagnosis techniques are they: 1) cost less, 2) are capable of early detection, 3) aid therapeutic monitoring, 4) detect tumour heterogeneity 5) detect medicine resistance and 6) are more comfortable for the patient (avoiding the need for surgery).

Expectations regarding the market potential of this technique were strengthened by the approval of the first liquid biopsy test by the FDA (2016)[29]. JP Morgan estimated (2015) a market opportunity of c. USD 20Bn (2020) for next generation sequencing[30] (NGS, mass sequencing). However, initial expectations have not been met with the penetration of this technique having been delayed: several sources value the current market at c. USD 1.5Bn, with liquid biopsies not having managed to replace (to date) tissue biopsies in any of the potential markets.

…with long-term growth potential via the cannibalisation of conventional techniques and its adoption in pharmaceutical research and preventive therapy

Although this technique was discovered decades ago, a lack of standardised tests has impeded research, delaying its clinical adoption. However, the market has gained traction in recent years, in anticipation of the results of numerous small-scale clinical trials (subsequently scalable) demonstrating its efficacy. The increase in the number of scientific publications in this area, together with progress in next generation sequencing will drive market growth in the long term, putting liquid biopsies at the forefront of cancer research.

Advances in technological integration that enable the use of less invasive diagnostic techniques will accelerate their penetration over the long term, exceeding USD 5Bn +5y. The biggest market opportunity will come from their use as preventive therapy (population-wide screening).

The acquisitions of Foundation Medicine (2018), Genomic Health (2019), Qiagen and GRAIL (2020; the latter specialising in big data with a focus on personalised medicine) demonstrate the industry's growing interest in positioning itself in this market segment. In addition, there is the

[27] Polymerase Chain Reaction (PCR).

[28] Circulating tumour DNA (ctDNA), microRNA (miRNA) and circulating tumour cells (CTCs).

[29] Cobas EGFR mutation test (circulating tumour DNA) used to detect genetic mutation in patients with lung cancer.

[30] Next Generation Sequencing (NGS): technologies for carrying out the mass sequencing of nucleic acids (DNA, deoxyribonucleic acid, and RNA, ribonucleic acid).

creation of the European Liquid Biopsy Society (ELBS, 1Q20)[31], aimed at boosting the penetration in clinical practice of this technique.

A market led by large corporations…

That operate in the area of molecular diagnostics, whilst also marketing their specialised medical equipment, together with research companies (listed and private).The Swiss company Roche (Roche Diagnostics) leads the global market, followed by companies such as Qiagen (Netherlands), Siemens Healthcare (Germany), bioMérieux (France), Novartis (Switzerland), and the US companies Hologic, Abbott Laboratories, Thermo Fisher Scientific, Bio-Rad Laboratories, Becton Dickinson, Beckman Coulter Inc., Cepheid, Danaher and Agilent Technologies, among others. Among the large molecular diagnostics laboratories, Exact Sciences and Guardant Health stand out, with the latter being the clearest benchmark for PANG. In addition, the Spanish company Atrys Health, which provides medical diagnosis and treatment (radiation therapy) services, has liquid biopsy research lines.

Molecular diagnostic tests are mainly carried out in health centres and central laboratories (and to a lesser extent through the sale of "OTC" tests)[32]. Growth is likely to occur mainly in laboratories (given the larger number of patients and access to innovative infrastructure and skilled professional personnel). In the domestic market, large European laboratories of note (such as SynLab and Unilabs) co-exist with smaller national laboratories (Echevarne, Megalab, Cerba, etc.). Most of the R+D molecular diagnostics laboratories that do not market their medical equipment incur in operating losses.

Table 1. Key players in the liquid biopsy market segment

Company	Mkt. Cap	EV	Country	Rev. Growth 14-19	EBITDA/Rev 2019	ND/EBITDA 2019	EV/EBITDA	P/E 2019
Molecular Diagnostic Laboratories					**n.a.**	**n.a.**	**n.a.**	**n.a.**
Exact Sciences Corp	13,164.3	13,451.3	USA	250.1%	n.a.	n.a.	n.a.	n.a.
Guardant Health Inc	8,700.5	7,942.4	USA	n.a.	n.a.	n.a.	n.a.	n.a.
Neogenomics Inc.	4,145.1	4,038.9	USA	38.3%	12.7%	-1.3	n.a.	580.4
Biocartis	282.9	297.5	Belgium	34.6%	n.a.	n.a.	n.a.	n.a.
Atrys Health	252.8	250.8	Spain	n.a.	18.0%	-0.4	n.a.	n.a.
MDXHEALTH SA	55.3	44.2	Belgium	1.7%	n.a.	n.a.	n.a.	n.a.
Biocept	54.5	36.1	USA	113.8%	n.a.	n.a.	n.a.	n.a.
Advanced Medical Equipment				**9.8%**	**28.3%**	**1.8**	**26.1**	**48.2**
Thermo Fischer	156,991.6	170,228.4	USA	10.3%	25.6%	2.3	29.2	47.5
Danaher	136,608.9	153,802.5	USA	8.5%	24.9%	0.4	38.7	63.0
Becton Dickinson	58,193.9	71,706.6	USA	18.9%	30.0%	3.6	15.1	53.6
Agilent	27,738.8	28,563.2	USA	7.5%	25.1%	0.8	24.5	28.9
Qiagen	10,360.3	11,181.8	Netherlands	4.1%	35.6%	1.8	23.0	n.a.
Global Leader								
ROCHE	248,566.6	259,861.8	Switzerland	7.5%	39.9%	0.2	11.5	19.1
PANG	26.7	29.3	Spain	22.3%	n.a.	n.a.	n.a.	n.a.
Bio Diagnostics & Testing (1)	**n.a.**	**n.a.**	**n.a.**	**13.8%**	**23.4%**	**3.6**	**27.2**	**30.8**

And with M&A as an industrial strategy to speed up growth

In addition to the efforts of the market leaders to diversify their product portfolios (R+D) and invest in strategic alliances (joint-ventures), concentration has been a clear industry trend. Roche continues to be one of the most aggressive players in this respect: integration of Genentech (2009; USD 46.8Bn), followed by smaller acquisitions such as Iquum (2014; USD 0.5Bn), GeneWeave (2015; USD 0.4Bn), Foundation Medicin (2018, USD 5.3Bn) and Spark Therapeutics (2019; USD 4.8Bn)[33].

Other examples include the acquisition of Genomic Health (a reference in the liquid biopsy segment) by Exact Sciences (2019; USD 2.8Bn, 6.3x EV/Sales and 42.5x EV/EBITDA), and more recently the bids made by Thermo Fisher for Qiagen (May 2020; USD 11.5 Bn; c. 25x EV/EBITDA) and by Illumina for GRAIL (September 2020; USD 8Bn), the latter also being positioned in liquid

[31] Replacing the European consortium that sponsored the CANCER-ID (2015-2019) research project, promoted by the JV Innovative Medicines and sponsored by the EU (Programme FP7/2007–2013).

[32] Over the counter (OTC).

[33] Spark Therapeutics, a company that generated c. USD 65Mn in cumulative revenues -12m prior to the takeover, recording negative EBIT.

biopsies. In 2018 Qiagen acquired the Spanish company STAT-Dx[34], joining forces in that same year with NeuMoDx (whose acquisition has been completed this year).

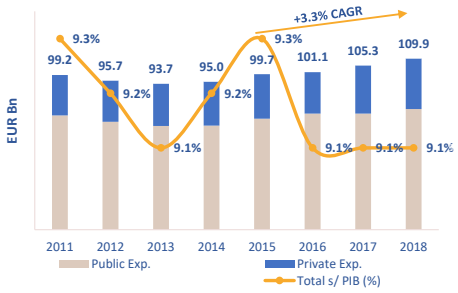
An industry that still has challenges to overcome…

The main challenge facing the industry is the lack of medical professionals (especially oncologists) who know how to use the latest molecular diagnostic technologies, restricting their use. Additionally, the deepening of the recession caused by Covid-19 could slow their expansion (given their higher cost compared to other technologies).

…And that will be favoured by the "challenge" of the sustainability of health spending

The measures implemented at the beginning of the previous decade to contain health spending in Spain have kept public health spending at c. 6.5% of the GDP (EUR 77.4Bn in 2018) and total health spending at c. 9% of the GDP, in line with the average for OECD countries. The public health system accounts for c. 70% of total spending (CAGR 2015-2018: 2.9%, a level which continued in 2019).

Chart 17. Healthcare expenditure (Spain)



Source: Systems of Health Accounts 2018 (Ministry of Health), Annual Report of the National Health System (Ministry of Health, Consumption and Social Welfare).

However, the increase in the health bill, associated with an ageing population, the chronic nature of diseases and continuous progress in technological and scientific advances, will continue to pose a challenge for the sustainability of current health systems. OECD estimates included in a report[35] published prior to the Covid-19 pandemic, pointed to a cumulative increase of c. +1p.p. in the health burden in Spain (9.9% of the 2030e GDP) and of c. +1.4p.p. in the average for European countries. In addition, the health management of the Covid-19 crisis will help to increase public health spending in 2020 (+0.4p.p. of the GDP according to the Bank of Spain).

In this respect, the private hospital sector (PANG's target market), will complement the public system. The Spanish health system had 806 hospitals in 2018 (458 of which were private), of which 508 are general hospitals and only 7 specialise in oncology.

[34] A biotech company specialising in the development of next generation multiplex diagnostic tests.

[35] "Health at a Glance"(OECD).

A favourable backdrop that should drive the business thanks to COVID (m/t) and growth in the liquid biopsy market (l/t)

Chart 18. Contribution to revenues by business line

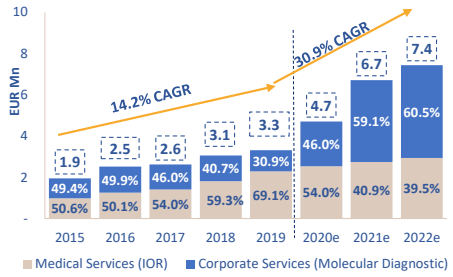
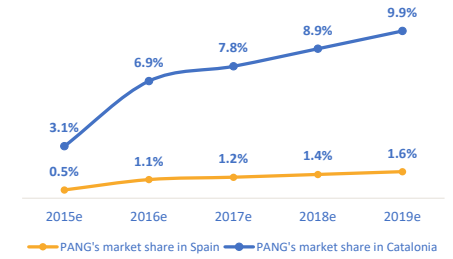
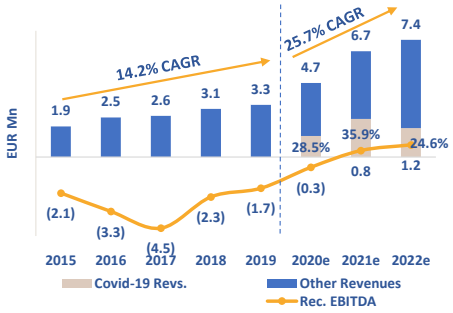


Chart 19. National market share in oncology (PANG)



Note: Market share based on cancer incidence.

Chart 20. Revenues vs. Rec. EBITDA and Covid-19 business contribution (%)



PANG offers integrated and personalised oncological diagnostic and treatment services via two complementary business lines: 1) clinical care, through the Instituto Oncológico Doctor Rosell (the Doctor Rosell Oncology Institute or IOR), and 2) corporate services (molecular diagnostics and biomarker discovery). In addition, PANG carries out research activities, something that is essential to attracting and retaining medical/scientific talent (51 scientific articles published in important media).

While revenue from the third party services division (molecular diagnostics) have remained stable -5y (an average of c. EUR 1Mn/year), those generated by clinical care (oncology) have increased c. 2.5x in the same period, to EUR 2.3Mn in 2019 (69.1% of consolidated revenue; CAGR 23.5% -5y). As a result, market share has tripled vs. -5y (now c. 10% in Catalonia and c. 1.5% at the national level).

In addition to revenue generated by clinical visits, IOR provides Immunohistochemistry, Endobronchial Ultrasound (EBUS)[36], oncological surgery and molecular diagnostics services to its patients. PANG focuses on the private health care sector, with the bulk of the c. 26,000 patients treated at IOR being covered by insurance companies. According to UNESPA[37], c. 70% of private centres' revenues come from insurance companies (with c. 10Mn people having health insurance in Spain).

Acceleration of revenue growth (CAGR +25.7% +2y), boosted by COVID

Our scenario for 2020-2022e envisages an acceleration of revenue growth (m/t), to EUR 7.4Mn at the end of the period (> +2x vs. -3y; CAGR +25.7% +2y). Growth underpinned by: 1) the expansion of the clinical care business (greater hospital penetration), 2) the broadening of the corporate services contract portfolio and 3) its diversification via the incorporation of business lines associated with the management of Covid-19 (production and diagnosis of PCRs, quick tests, R+D unit).

At the height of the COVID crisis in Spain (1H20), the saturation of the public health system meant urgent operations of various specialities (including oncology) had to be diverted from public to private hospitals. Management of the pandemic has involved co-operation between the public and private health systems resulting in a single health model that could become more consolidated in the long term. However, management of PANG says its clinical care business has not benefited from patients being diverted to IOR.

The Covid-19 pandemic is a growth opportunity

PANG has been very pro-active in this new situation, launching an R+D unit in its subsidiary IOR (for the generation and search for biomarkers that predict the clinical outcome of Covid-19 patients) and also creating a pre-clinical services unit in COVID for the pharmaceutical industry. PANG has increased its diagnostic capacity, incorporating a new production and diagnostic chain for PCRs and ELISA[37] for Covid-19 (capacity > 180,000 tests annually).

These measures have strengthened the company's portfolio of contracts both in the research area (PharmaMar, In3BIO) and in the management of Covid-19 (contract with CEOE Aragón and MAS Prevención as a laboratory for carrying out PCR tests). We estimate that business associated with Covid-19 will contribute c. 30% of growth in consolidated revenue in 2020-2022e.

[36] A technique for the diagnosis of diseases affecting the mediastinum such as lung cancer.

[37] Analysis of IgM and IgG antibodies is carried out via the benchmark ELISA test.

Chart 21. Medical care revenues (IOR)

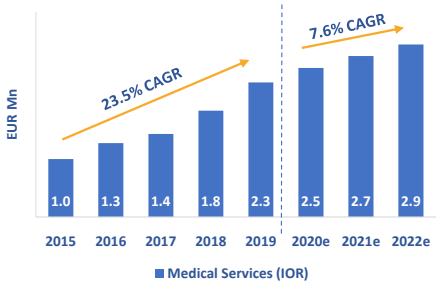


Chart 22. Medical visits performance (IOR)

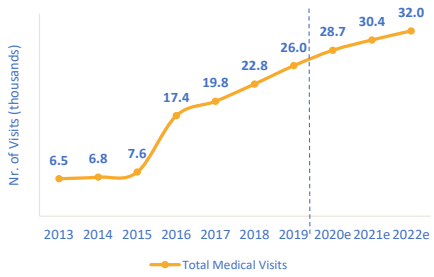
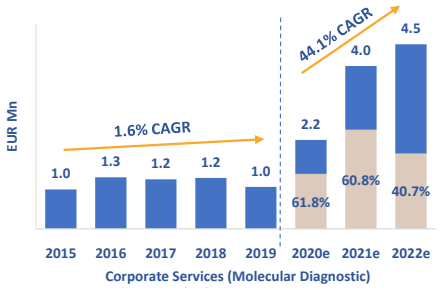


Chart 23. Corporate services revenues



Note: reported in the past by PANG as molecular diagnostic business line

The clinical care business will continue to grow although more slowly (CAGR 7.6% +2y)

The revenue generated by this business line amounted to EUR 2.3Mn in 2019 (CAGR -5y: +23.5%), with the total medical visits dealt with by its subsidiary IOR multiplying c. +3.5x vs. -5y.

While the medical services activity is currently carried out in 5 hospitals, the bulk is generated in Hospital Dexeus (c. 50% of visits) with which the company has been working since 2007 and where PANG has its molecular diagnostics laboratory. However, the 3 hospitals incorporated to the network in 2016: the Hospital General de Catalunya (HGC), Hospital Universitario Sagrado Corazón (HUSC) and el Centro Médico Teknon, have recorded double-digit growth (-3y). The contribution of Clínica del Vallés, incorporated at the end of 2019, is immaterial at present.

This division's growth will be underpinned by the gradual increase in the penetration of its services in the hospitals most recently incorporated to the network. The recently renewed contracts with these will last until 2022-2023 (longer than the annual periods usual in hospital contract practice). Just to give some idea, HGC's bigger size (c. +2x vs. Dexeus) gives credibility to the growth potential of this business line. Our estimates point to a CAGR of 7.6% +2y, that would take revenue to EUR 2.9Mn in 2022e, underpinned by a c. +25% increase in the number of patients treated (which could increase c. 1.5x +5y, without stressing the model).

The ability to attract talent is critical

The expansion of the excellent medical team (a mainstay of strategy) will be critical to driving this business line (PANG will end 2020e with c. 15 oncologists on staff). However, this is a difficult proposition given the national shortage of oncologists. The increased incidence of cancer means oncologists are working in both the public and private health care systems, which is detrimental to patients as it increases the patients/doctor/day ratio. This contrasts with PANG's policy of having its doctors spend more time with their patients.

In addition, innovation is continuous in oncology (new technology, a multi-disciplinary approach, personalised medicine), so proximity to research centres is almost essential in order to be at the forefront of therapeutical developments. PANG's commitment to R+D together with the prestige of its medical management team are key to attracting new talent.

The incorporation of new hospitals to its network and/or oncologists to its staff will underpin/accelerate growth in this business line.

Corporate services (molecular diagnostics) a mid-term growth driver levering on the COVID crisis

PANG provides molecular diagnostics (c. 50% of this business line's revenues) and biomarker discovery services. After recording stable revenue growth recently (EUR 1.0Mn in 2019; CAGR 1.6% -5y), the current Covid-19 crisis will drive turnover in this business line (> +2x +2y).

Historically, this has been a loss-making business, accumulating EUR -9.1Mn in operating losses -5y, with the research activity accounting for c. EUR -7Mn (c. 50% of the EUR 13Mn invested in R+D by the group in the same period).

Levering on its know-how in liquid biopsy, PANG has capitalised on the current health care crisis to create (in May 2020) an R+D unit at its subsidiary IOR. This unit focuses on the generation and search for biomarkers that predict the clinical outcome of Covid-19 patients. PANG has also increased its diagnostic capacity, incorporating a new production and diagnostic chain for PCRs, fast antibody tests and ELISA for Covid-19 that will be fortified by the marketing (s/t) of antigen tests. In addition, it has created a pre-clinical services unit in COVID for the pharmaceutical industry. Estimated revenues associated with COVID will drive the business in the mid term (c. 60% of its revenue +2y).

A continuous news flow enhancing business visibility

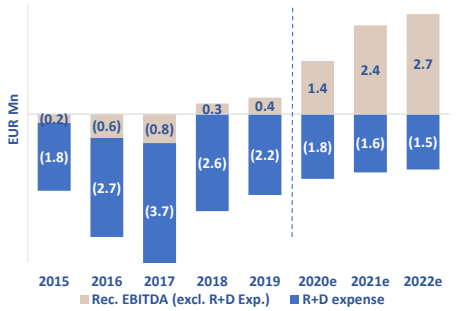
After the announcement of its incorporation as a benchmark European laboratory for Qiagen (1Q20; focused on the pharmaceutical industry), PANG has been very active since the pandemic

broke out, the diversification of its business towards COVID being accompanied by the announcement of several contracts in this area that improve revenue visibility.

Table 2. 2020 Newsflow

Date	Relevant Event
08/07/2020	**Contract with In3Bio (COVID: EUR 1.1Mn; clinical study)**
	PANG's historical client in oncology.
02/07/2020	**Contract with PharmaMar (Aplidine in COVID)**
	In-vivo Pre-clinical trial: humanized mouse model (HIMICE; ACE2), unique in the world.
11/06/2020	**Eurostars EU Programm (EUR 0,3Mn Grant; 60% of total budget)**
	E-PreBioM Project: Pre-Clinic Biomarkers Discovery Platform based on liquid biopsy in Immuno-Oncology.
03/06/2020	**Contract with Roche (EUR 1.0Mn)**
	Venezolung Trial (Phase 1b/II designed by PANG's researchers).
27/05/2020	**Creation of R&D COVID Unit (Dexeus hospital)**
	Use of liquid biopsy in COVID.
07/05/2020	**First accredited laboratory in Mass Sequencing (NGS) in liquid biopsy**
	Previously first laboratory in pharmacogenomics (2009) and in liquid biopsy for specific mutations (2016).
03/05/2020	**CEOE COVID Aragón Agreement**
	PCR, Quick antibody tests, ELISA; > 250 companies diagnosed.
04/03/2020	**Alliance with Qiagen (multinational diagnostic company) as 1 of its 5 reference laboratories**
	Day One Readiness European Program; for Qiagen's (Pharmaceutical) clients.

Chart 24. Rec. EBITDA (excluding R+D expense) vs. R+D investment



Note: Our estimates includes the R+D expense in the P/L which is subsequently capitalised (below the EBITDA).

Chart 25. R+D/Revenues (%) vs. Revenues

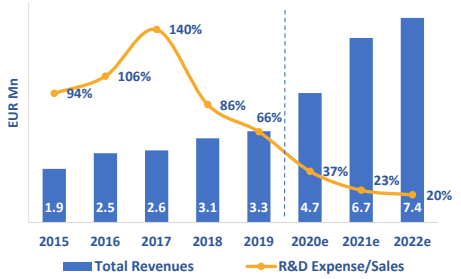
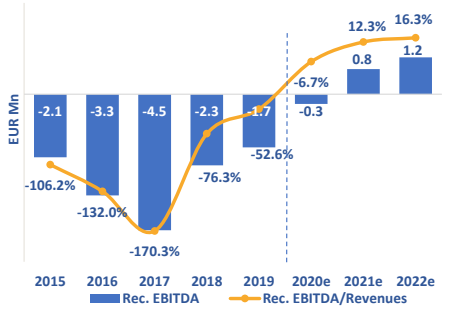


Chart 26. EBITDA vs. EBITDA/Revenue margin



Note: Rec. EBITDA excludes the capitalisation of R+D expense.

The difficulty in neutralising the impact of R+D on Rec. EBITDA: break-even 2021e

Historically, its research activity has held back the group's P/L. PANG has invested a total of c. EUR 13Mn -5y on R+D (EUR 2.2Mn 2019), earmarking c. 50% for the development of medicines with its UK partner CRT and the rest for the development of biomarkers in its molecular diagnostics laboratory. Research has absorbed the profitability generated (-5y) by the clinical care business (whose EBITDA/revenue margin will approach the sector level of c. 25% in the mid term).

The demanding level of investment required to develop medicines forced PANG to discontinue (in 2019) investment in these lines of research. However, PANG has maintained 46% of the ownership of the development programme with CRT for its potential licencing, without the need for additional investment. This change in strategy will result in a reduction in the budget allocated to research: EUR 1.8Mn 2020e (-20.0% y/y), some 37.2% of revenues (c. -30p.p. y/y), approaching 20% of revenues +2y (in line with the industry).

Given the scant visibility of the progress made in the lines of research carried out with CRT due to the company no longer being involved in development, it is preferable to exclude the potential impacts of this (collection of milestone payments, royalties, etc.) in the longer term.

On the other hand, both the broadening of the corporate services contract portfolio (pharmaceutical industry, PCR tests for Covid-19, etc.), and the expansion of the IOR business (clinical care) will largely neutralise the impact of R+D on Rec. EBITDA. As a result, PANG will reach break-even in 2021e (EUR 0.8Mn of Rec. EBITDA), surpassing the EUR 1Mn barrier +1y. In this respect, the impact of milestone payment collections will be crucial (c. 20% of consolidated revenues).

Table 3. Historical reconciliation of Rec. EBITDA (LH) vs. PANG's reported EBITDA and LH approach to PANG's reported EBITDA

(EUR Mn)	2015	2016	2017	2018	2019	2020e	2021e	2022e
Total Revenues	**1.9**	**2.5**	**2.6**	**3.1**	**3.3**	**4.7**	**6.7**	**7.4**
Gross Margin	0.8	0.4	(0.2)	1.7	2.2	3.6	5.0	5.5
Rec. EBITDA	**(2.1)**	**(3.3)**	**(4.5)**	**(2.3)**	**(1.7)**	**(0.3)**	**0.8**	**1.2**
Capitalized R&D Expense	1.8	2.7	3.7	2.6	2.2	1.8	1.6	1.5
Operating Grants	0.1	0.0	(0.1)	0.3	-	0.4	0.1	0.1
Reported EBITDA Approach (LH)	**(0.1)**	**(0.6)**	**(0.8)**	**0.5**	**0.4**	**1.8**	**2.5**	**2.8**
Reported EBITDA (PANG)	**(0.2)**	**(0.3)**	**(0.7)**	**0.7**	**0.8**	**n.a.**	**n.a.**	**n.a.**

Note: The difference between the reported EBITDA approach figure given by Lighthouse and that reported by PANG is mainly due to subsidies allocated to investment in depreciable assets (with no impact in EBITDA).

The contract format inherent to the provision of services to the pharmaceutical industry makes group EBITDA volatile (due to the net impact of the potential billing of milestone payments at the beginning of the contract or during this). The billing of a milestone payment in 2013 (EUR 1.5Mn) meant PANG recorded positive EBIT that year for the first time. Accordingly, it is

Chart 27. ND vs. ND/Equity and capital increase

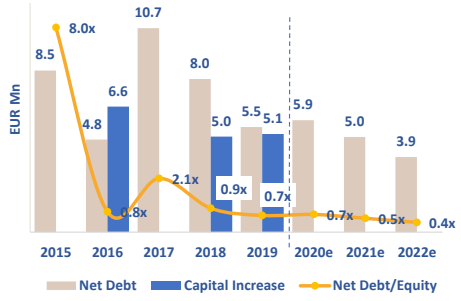


Chart 28. Net profit vs. ROE

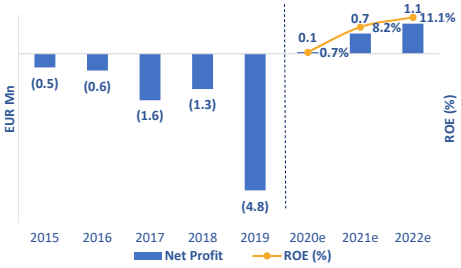


Chart 29. Rec. FCF vs. NWC/Sales

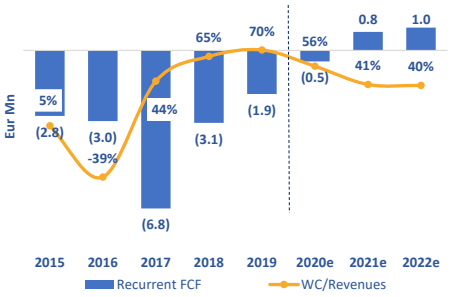
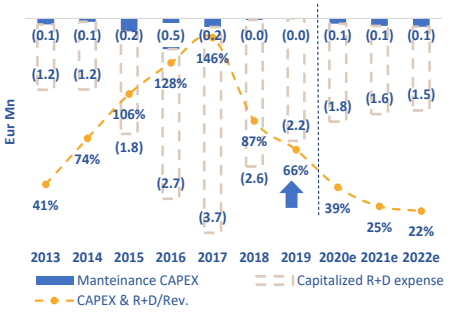


Chart 30. Maintenance CAPEX vs. R+D Investment (capitalisations) vs. CAPEX & R+D capitalisation/Revenues.



likely that, given the still low level of group turnover (EUR <8 Mn over the estimated period), the P/L will remain volatile.

In addition, the collection of subsidies (EUR 0.4Mn[38] 2020e) together with the capitalisation of R+D expenses (EUR 1.8Mn 2020e), will result in break-even in EBITDA and EBIT already in 2020e.

Although the opening of proprietary liquid biopsy units in public hospitals too (Hospital del Mar; 2019) is a sign of tougher competition in the long term, PANG has margin to defend its returns.

In principle high debt that (to date) has benefited from sponsorship

Although group debt remains high (EUR 5.5Mn 2019; 0.7x ND/Equity), c. 20% of the EUR 7Mn of gross debt is subsidised (by the CDTI or The Centre for the Development of Industrial Technology), with 28.3% being associated with the majority shareholder (the Solans family; 39.2% of capital). The latter have in the past repeatedly provided the company with funding, which to a large extent has been capitalised (EUR 8.5Mn in 2016-2019, c. 50% of the capital increases carried out in that period). Moreover, cash generation from 2021e will enable debt to be gradually reduced (c. 30% of debt expires > 2022).

The last capital increase (2019) to offset EUR 3.3Mn in credit balances will reduce financial expenses (m/t). Our numbers envisage annual financial expenses of EUR -0.1Mn (vs. an average of c. EUR 0.3Mn -3y), reducing the cost of debt to 2%.

Exceed break-even in ordinary NP (2021e)

On the other hand, vs. a 2019 that was affected by the need to clean up the balance sheet (impairment of intangibles associated with the development of medicines impacting PBT to the tune of EUR -2.5Mn), our numbers do not include additional impacts from extraordinary items.

In addition, although current policy is not to use tax loss carryforwards, PANG has EUR 3.1Mn in this respect that will enable it to keep the tax rate below <10% in the mid term. Accordingly, we expect PANG to achieve break-even in NP in 2020e (in 2021e at the ordinary level), reaching EUR 1.1Mn +2y, taking the ROE to c. 10% (in the absence of further capital increases) vs. losses for peers and the c. 15% offered by companies that sell advanced medical equipment.

Gradual reduction in the working capital/revenue ratio (c. -30p.p. +3y)

PANG's working capital requirements are affected both by the long collection periods inherent to the exposure to hospitals of its clinical care services (236 days at the consolidated level in 2019; +c.30% y/y), and by the volatility associated with the billing and collection of contract milestone payments on the provision of services to the pharmaceutical industry.

However, the growing contribution to revenues from corporate services (60.5% of consolidated revenues in 2022e, c. +2x vs. -3y), will shorten the average collection period (c. -20%/year for the next 2y), gradually reducing the working capital/revenue ratio (40% 2022e, -30p.p. vs. -3y).

And in principle without the need for additional CAPEX in the mid term to expand the business

The current processing capacity of the company's laboratory will enable it to leverage the business in the long term without the need for additional investments in assets. Our CAPEX estimates do not include investment in R+D. The latter is included in the P/L via subsequently capitalised expenses (EUR 1.8Mn in 2020e and declining to EUR 1.5Mn +2y), in accordance with PANG's accounting policy.

In this respect, our estimates envisage an immaterial impact of CAPEX on recurrent FCF (EUR -0.1Mn/year on maintenance). If investment on R+D (capitalised expenses) were to be added to maintenance investment, total investment would have been 66% of revenues in 2019 (a reference point, after the discontinuation of investment on the development of medicines

[38] Subsidy granted within the framework of the European project for a Pre-Clinical Platform for the discovery of biomarkers in Immuno-Oncology based on liquid biopsy (EUR 0.3Mn).

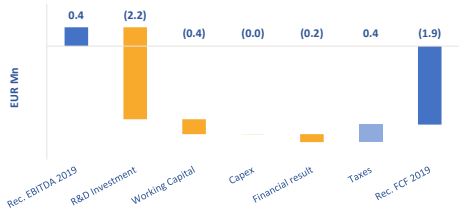
from 2018). This level is likely to decline gradually (thanks mainly to the increase in turnover), approaching 20% mid term.

But positive FCF will have to wait until 2021e

Investment on R+D (EUR 2.2Mn 2019, -16.6% y/y) is the item that most impacts the company's CF. Although the strategic change of direction in R+D will continue to reduce this item (EUR 1.8Mn 2020e, -20.0% y/y), this investment will continue to absorb improvements in working capital and the financial burden (-10% and -27% y/y respectively in 2020e).

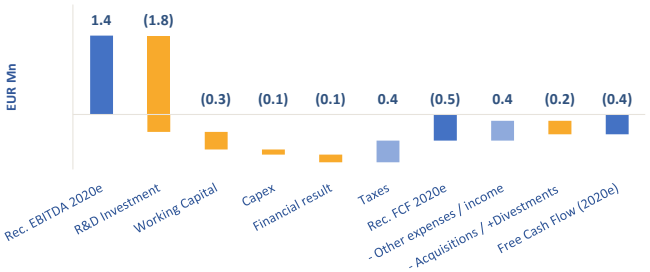
On the other hand, the instruments for the monetization of tax credits associated with the investment in R+D used by PANG (cash back), will generate EUR 0.4Mn of additional cash in 2020e (similar to 2019) and EUR 0.3Mn/year +2y. Their contribution, together with subsidies for R+D (EUR 0.4Mn 2020e) will not be enough to attain break-even in recurrent FCF in the shorter term. In addition, the cancellation of the debt with its UK partner CRT (2020e) will result in an additional cash outflow of EUR 0.2Mn this year.

Chart 31. Rec. Free Cash Flow impacts 2019



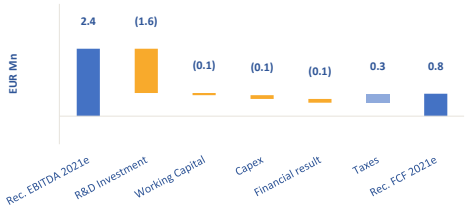
Note: EBITDA Rec. excludes R+D

Chart 32. Rec. Free Cash Flow impacts 2020e



Note: EBITDA Rec. excludes R+D

Chart 33. Rec. Free Cash Flow impacts 2021e



Note: EBITDA Rec. excludes R+D

Revenue growth (EUR 6.7Mn 2021e, +42.6% y/y) together with the improvement in the margin arising from the revenue mix (the provision of corporate services, with a bigger margin, will contribute c. 90% of growth in consolidated turnover) will turn the "picture" around in the mid term. This process could be accelerated if PANG were to sign new contracts with the pharmaceutical industry which involved additional milestone payment collections.

Our central scenario envisages positive recurrent from 2021e (EUR 0.8Mn), with a recurrent FCF yield of c. 3% (in line with the sector). However, the performance of FCF will be highly sensitive to three factors: i) the revenue mix, ii) the potential collection of additional contract milestone payments for the provision of services and iii) the management of working capital investment. Given the significant presence of intangibles associated with R+D on the balance sheet, we rule out the payment of dividends in the long term.

In conclusion: Positive FCF in 2021e, after > 10y burning cash.

PANG has based its growth strategy on the complementary nature of its two business lines: 1) precision clinical care in oncology and 2) the provision of molecular diagnostics in oncology services to companies (specialised in liquid biopsy and mainly directed at the pharmaceutical industry). This strategy has resulted in an "organic" CAGR of +14.2% -5y, consolidating both its scientific capacity (renewal of the portfolio of contracts with the pharmaceutical industry), and the improvement in its activity indicators (CAGR -5y +36% in medical appointments).

The incorporation to the business (2020) of COVID-specific (although not strategic) services, capitalising on the current public health situation, will be critical to driving the business in the mid term. In 2020-2022e PANG should:

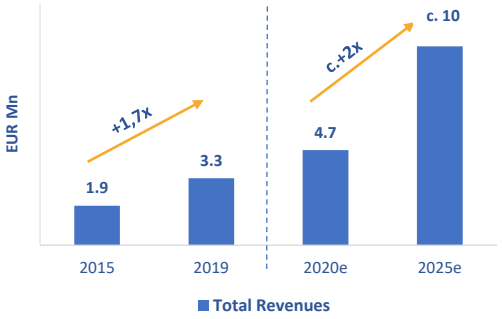
- See an acceleration of organic revenue growth (CAGR 25.7% +2y; contribution of c.65% associated with the corporate services division). The window of opportunity offered by the current Covid-19 crisis will generate c. 30% of estimated consolidated turnover in the period.
- Exceed break-even in recurrent EBITDA in 2021e NP (EUR 0.8Mn).
- Generate positive recurrent FCF in the same year, bringing the FCF yield into line with that of the sector (3.0% 2021e).

But, what can we expect from PANG in the very long term?

PANG has specialised in the liquid biopsy segment, where it seeks to position itself as a European leader in cancer diagnosis and treatment (something to a certain extent endorsed by its alliance with the multi-national diagnostic company Qiagen). This still dormant market (valued at USD 1.5Bn 2019) offers significant growth potential (c. +USD 20Bn in the very long term), especially in mass sequencing (NGS; a technology its laboratory possesses).

The technical advances in liquid biopsy and the growing scientific evidence regarding its efficacy and medicine-financial benefits (cheapening of its cost against a backdrop of increasing healthcare spending), will underpin market growth (favouring the penetration of its clinical use), driving PANG's revenues in the longer term. Accordingly, it is logical to think that its molecular diagnostics business line will lead growth in group revenues in the longer term, with these doubling +5y.

Chart 34. Revenues performance (in the longer term)



This "snapshot" cannot be captured in growth companies like PANG using a DCF valuation based on mid-term estimates.

Remember that PANG holds rights to the potential licencing (in the longer term) of some of the medicines developed (until 2018) in conjunction with its UK partner CRT, which would fully impact the group's P/L. Moreover, it would be feasible for PANG to lever on its know-how to enter into new alliances in the long term with partners (financial/industrial) that enable it to reposition itself in the drug development, without negatively impacting the P/L.

Besides, M&A frenzy in the liquid biopsy segment should continue in the mid to long term as a way of achieving growth in the sector. In this respect, we do not rule out PANG being involved in sector concentration movements (passively or actively, in growth areas, if it has the financial muscle required to do so).

Valuation inputs

Inputs for the DCF Valuation Approach

	2020e	2021e	2022e	Terminal Value (1)
Free Cash Flow "To the Firm"	**(1.0)**	**0.5**	**0.7**	**n.a.**

			Best Case	Worst Case
Market Cap	**26.7**	At the date of this report		
Net financial debt	**5.5**	Debt net of Cash (12m Results 2019)		
Cost of Debt	2.0%	Net debt cost	1.7%	2.2%
Tax rate (T)	20.0%	T (Normalised tax rate)	=	=
Net debt cost	**1.6%**	**Kd = Cost of Net Debt * (1-T)**	**1.4%**	**1.8%**
Risk free rate (rf)	0.2%	Rf (10y Spanish bond yield)	=	=
Equity risk premium	9.0%	R (own estimate)	8.5%	9.5%
Beta (B)	1.4	B (Thomson Reuters and Lighthouse)	1.3	1.5
Cost of Equity	**12.8%**	**Ke = Rf + (R * B)**	**11.2%**	**14.4%**
Equity / (Equity + Net Debt)	82.9%	E (Market Cap as equity value)	=	=
Net Debt / (Equity + Net Debt)	17.1%	D	=	=
WACC	**10.8%**	**WACC = Kd * D + Ke * E**	**9.5%**	**12.2%**
G "Fair"	**2.5%**		**2.5%**	**2.0%**

(1) The terminal value, calculated on the last estimated FCF, does not reflect the company's growth potential at the issue date of this report.

Inputs for the Multiples Valuation Approach

Company	Ticker Reuters	Mkt. Cap	P/E 20e	EPS 20e-22e	EV/EBITDA 20e	EBITDA 20e-22e	EV/Sales 20e	Revenues 20e-22e	EBITDA/Sales 20e	FCF Yield 20e	FCF 20e-22e
Molecular Diagnostic Laboratories			2.1	21.2%	n.a.	67.2%	12.3	38.6%	13.2%	n.a.	32.5%
Exact Sciences Corp	EXAS.O	13,164.3	n.a.	86.2%	n.a.	90.6%	11.7	29.1%	n.a.	n.a.	n.a.
Guardant Health Inc	GH.O	8,700.5	n.a.	30.1%	n.a.	45.4%	33.6	31.5%	n.a.	n.a.	43.4%
Neogenomics Inc.	NEO.O	4,145.1	n.a.	n.a.	n.a.	99.3%	10.5	14.8%	6.4%	n.a.	n.a.
Biocartis	BCART.BR	282.9	n.a.	24.6%	n.a.	38.7%	6.4	41.1%	n.a.	n.a.	21.6%
Atrys Health	ATRY.MC	252.8	n.a.	n.a.	n.a.	n.a.	16.7	n.a.	20.0%	n.a.	n.a.
MDXHEALTH SA	MDXH.BR	55.3	n.a.	n.a.	n.a.	62.2%	1.9	19.2%	n.a.	n.a.	n.a.
Biocept	BIOC.O	54.5	2.1	-56.0%	n.a.	n.a.	5.1	95.8%	n.a.	n.a.	n.a.
Advanced Medical Equipment			30.4	11.0%	23.4	9.9%	6.8	7.0%	29.7%	3.0%	15.9%
Thermo Fischer	TMO	156,991.6	29.2	7.2%	24.7	6.1%	6.9	5.3%	28.0%	2.5%	18.7%
Danaher	DHR	136,608.9	40.9	13.2%	31.4	13.8%	8.5	9.5%	26.9%	2.6%	17.9%
Becton Dickinson	BDX	58,193.9	23.7	16.1%	18.1	15.2%	5.0	7.2%	27.8%	4.1%	10.4%
Agilent	A	27,738.8	32.6	13.4%	24.1	9.0%	6.4	7.4%	26.5%	2.5%	19.5%
Qiagen	QGEN.K	10,360.3	25.5	5.0%	18.5	5.4%	7.3	5.6%	39.4%	3.3%	13.3%
Global Leader											
ROCHE	ROG.S	248,566.6	15.7	7.1%	11.2	6.4%	4.5	3.7%	40.5%	6.3%	8.4%
PANG	PANGO.MC	26.7	n.a.	n.a.	n.a.	n.a.	6.2	25.7%	0.9%	n.a.	n.a.

Free Cash Flow sensitivity analysis (2021e)

A) Rec. EBITDA and EV/EBITDA sensitivity to changes in EBITDA/Sales

Scenario	EBITDA/Sales 21e	EBITDA 21e	EV/EBITDA 21e
Max	13.5%	0.9	32.4x
Central	12.3%	0.8	35.6x
Min	11.1%	0.7	39.4x

B) Rec. FCF and Rec. FCF - Yield sensitivity to changes in EBITDA and CAPEX/sales

Rec. FCF EUR Mn	CAPEX/Sales 21e		
EBITDA 21e	1.8%	2.0%	2.2%
0.9	0.9	0.9	0.9
0.8	0.8	0.8	0.8
0.7	0.7	0.7	0.7

Scenario	Rec. FCF/Yield 21e		
Max	3.3%	3.3%	3.2%
Central	3.0%	3.0%	2.9%
Min	2.7%	2.7%	2.6%

What could go wrong?

We consider risks to be those that could have a significant negative impact on our projections, mainly those for operating profit and free cash flow:

1. **Loss of critical personnel:** the management/medical/scientific team is one of PANG's main assets, so the loss of any of its members would have a significant impact on the group's business, diminishing its growth potential. Currently there are no retention clauses for key employees (the permanence commitment signed by the co-founders expired in November 2019).

2. **Revenue mix:** the bulk of revenues from clinical care services (69.1% of 2019 consolidated revenue) is generated from insured patients, with the insurance segment being exposed to the economic slowdown. In addition, potential changes to the coverage of health insurance policies could have a negative impact on the division's revenues. A 5% reduction in the volume of insured patients (vs. 2021e) would reduce Rec. EBITDA by 15% (EUR 0.7Mn 2021e).

   Besides this, the revenues from services to pharmaceutical companies are exposed to the execution periods of the contracts in the portfolio (because of having to comply with client schedules for clinical trials). The clinical trials in turn are exposed to regulatory and technological risks that could delay them, negatively impacting the group's P/L. A 5% reduction in the 2021e turnover of this business line would reduce Rec. EBITDA by 18% (EUR 0.7Mn 2021e).

3. **High concentration of the client portfolio and limited negotiating power.** The bulk of the clinical care division's revenues come from Grupo Quirónsalud. This results in a relationship of reciprocal dependence which exposes PANG to potential changes in strategy by this group. The contracts with the five Quirónsalud centres with which PANG currently works have been renewed (2022-2023). Not being able to extend the duration of these contracts over the longer term would significantly impact the group's P/L (c. 39.5% of 2022e consolidated revenues). This would force PANG to change group and probably location (the current agreement with QuirónSalud is limited to Barcelona).

   Similarly, >50% of revenues from corporate services (mainly to the pharmaceutical industry) are generated by < 10 habitual clients, so the loss of any of these would have a significant impact on group earnings. In addition, the disproportionately larger relative size of its clients, together with fierce market competition puts PANG in a weak negotiating position (which could reduce expected returns in the long term).

4. **Tougher competition:** The market in which PANG operates is highly competitive which could squeeze margins. While the opening of proprietary liquid biopsy units in public hospitals (Hospital del Mar; 2019) is a sign of tougher competition in the long term, the consolidation of the sector could in itself diminish PANG's negotiating capacity. A 5% across-the-board decline in the prices of the services marketed (excluding R+D contracts with the pharmaceutical industry) would reduce Rec. EBITDA by 20 % (EUR 0.7Mn 2021e).

5. **High debt:** PANG ended 2019 with gross debt of EUR 7.0Mn (28.3% with its majority shareholder: the Solans family). The latter have in the past repeatedly provided the company with funding, which to a large extent has been capitalised (EUR 8.5Mn in 2016-2019). Of short-term debt (53.2% of the total), EUR 1.2Mn corresponds to a line of credit provided by the Solans family. However, the (proven) support of its core shareholders should enable PANG to cope with debt maturities (m/t). Besides this, changes in interest rates would impact the group's P/L and CF (c. 20% of debt is at variable rates).

6. **Dependence of FCF on the collection of subsidies and the mechanism for monetizing tax deductions for R+D+i (cash-back):** In the past PANG has obtained financing from subsidies and "cash back" monetization mechanisms. These have contributed an average of EUR 0.5Mn and EUR 0.4Mn to FCF (-3y) respectively. Problems in obtaining further subsidies or the elimination of the R+D collection mechanism, would reduce group CF (our numbers include EUR +0.1Mn/year and EUR +0.3Mn/year respectively for these items).

7. **Significant presence of intangibles associated with R+D on the balance sheet:** EUR 5.1Mn in 2019 (c. 70% of its net intangible assets). The risk inherent to the R+D activity exposes PANG to potential impairments impacting its P/L and net worth.

8. **Reputational risk:** Inherent to clinical practice, which could harm the business' prospects. However, PANG covers this risk via civil liability insurance.

9. **Operational risk.** The molecular diagnostics activity is centralised in a single laboratory, whose potential unavailability (due to natural/human reasons) would negatively impact the group's P/L.

10. **Risk from the protection of industrial property and dependence on third party patents in developments.** Some of PANG's diagnostic methods and techniques depend on third party patents which could limit their future marketing, negatively impacting the P/L.

Effectively controlled by the Solans family with management in the hands of its founders

Table 4. Board of Directors

Name	Category	Date	Capital %
Topgenetics, S.L. (R. Rosell Costa)	President, Executive Co-founder	02/11/2016	9.9%
Javier Rivela Rodríguez	CEO, Executive Co-founder	02/11/2016	8.9%
Grupo Pikolín, S.L. (Familia Solans)	Proprietary	02/11/2016	31.3%
Biolifepat, S.L. (S. Ramón y Cajal)	Proprietary Co-founder	02/11/2016	3.5%
Maectorax, S.L.U. (J.A. Maestre)	Proprietary Co-founder	02/11/2016	3.5%
Rafael Lopez-Diéguez	Independent	02/11/2016	0.0%
Jesús Tejel	Independent	02/11/2016	0.0%
Total			**57.1%**

A group controlled by the Board of Directors (57.1% of share capital), that is fully involved in its management, and has been stable since the market flotation (2016).

1. **The Board of Directors is controlled by the founders,** 4 of its 7 members (and 25.9% of capital), who also hold the positions of Chairman (Dr. Rafael Rosell) and CEO (Javier Rivela), both executive directors. The Board has a mainly medical/scientific profile (of renowned international prestige). The two independent directors have financial and legal profiles.

2. **With the presence of the majority shareholder.** The Solans family (31.3% of capital) is represented on the board by its company Grupo Pikolín. The board controls 57.1% of capital, guaranteeing its interests are aligned with those of minority shareholders. According to the company's bylaws, the position of director is held for a maximum term of six years, renewable for periods of equal duration (in accordance with prevailing legislation).

3. **The board is fully involved in management.** PANG's management team is organised in two main areas, headed by its executive directors: Dr. Rafael Rosell (an international authority on lung cancer), as Scientific Director of the group, who runs the Dr. Rosell Oncology Institute (IOR) oncology service (care management), and Javier Rivela, as CEO. In addition, Dr. José Antonio Maestre and Dr. Santiago Ramón y Cajal, co-founders of PANG of renowned international prestige, are responsible, respectively, for the surgery and molecular pathology teams (the latter being critical to patient treatment).

4. **With incentives in the form of bonuses "only" for its executive directors and CEO.** Variable compensation (annual/multi-annual) being in the shape of shares, stock options and remuneration indexed to the share price and in accordance with the bylaws but with no bonus-malus/claw-back clauses. The compensation of the board has on average represented c. 8% -5y of personnel costs (5.8% in 2019).

5. **And with a golden parachute clause for the CEO.** Who will be entitled to receive c. EUR 0.26Mn in the event of dismissal (non-disciplinary) for the performance of the functions pertaining to his position and a non-compete indemnity (for a period of 12 months from the extinction of his contract). In addition, in the event of his voluntary resignation, and if the company should decide to limit the services (professional or labour) he may provide to other companies (for a period of 12 months from the extinction of his contract), the CEO shall be entitled to receive monthly compensation of EUR 0.01Mn during the period of this restriction.

6. **Related party transactions:** At the 2019 close the company had credit balances with shareholders in an amount of EUR 1.5Mn, of which c. 85% corresponds to the balance drawn down of the credit line (EUR 1.5Mn; 5% interest and expiry in July 2021) granted by Ebrosol Inversiones S.L., a company related to the Solans family (its largest shareholder), and an habitual source of funding for PANG. Since its market flotation, liabilities with this principal shareholder have been capitalised for a total of EUR 5.8Mn.

7. **And with no shareholder remuneration envisaged in the mid term.** Our projections rule out dividend payments (Pay Out 0% until, at least, 2022), with no commitment by the Group regarding the start of dividend payments. Prior to the payment of dividends, and in accordance with prevailing legislation, PANG must have available reserves that cover, at least, the amount of the R+D expenses shown on the asset side of the balance sheet. In the short term, attention will focus on making the business profitable (organically), strengthening the balance sheet.

Table 5. Capital increases vs. accrued results

Capital Increases	Var. amount (EUR)	Share Capital (EUR)	Issue premium (EUR)	Var. vs. -1y (%)	Accrued Results	R+D Assets
Status as at Dec. 2016	-	**212,207**	**9,758,831**	**0.0%**	**(3,582,309)**	**7,210,693**
Status as at Dec. 2017	-	**212,207**	**9,758,831**	**0.0%**	**(4,378,300)**	**10,791,438**
Credit compensation	2,500,000	25,000	2,475,000	11.8%		
Cash contribution	2,500,000	25,000	2,475,000	11.8%		
Status as at Dec. 2018	-	**262,207**	**14,708,831**	**23.6%**	**(6,312,257)**	**13,443,942**
Credit compensation	3,315,677	48,760	3,266,917	18.6%		
Cash contribution	1,819,940	26,764	1,793,176	10.2%		
Status as at Dec. 2019	-	**337,731**	**19,768,924**	**28.8%**	**(7,793,017)**	**13,135,241**
Total var. vs. 2016	**10,135,617**	**125,524**	**10,010,093**	**59.2%**	**(4,210,708)**	**5,924,548**

Note: The General Shareholders' Meeting approved (July 2020) the compensation of losses from previous years (EUR 7.8Mn at the end of 2019) with reserves.

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Appendix 1. Financial Projections

Balance Sheet (EUR Mn)	2015	2016	2017	2018	2019	2020e	2021e	2022e
Intangible assets	6.5	8.2	10.0	10.3	7.1	7.6	7.7	7.8
Fixed assets	0.6	0.9	0.9	0.8	0.6	0.6	0.6	0.6
Other Non Current Assets	2.2	2.7	4.0	3.8	4.0	3.6	3.2	2.9
Financial Investments	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Goodwill & Other Intangilbles	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Current assets	1.4	1.8	2.4	3.6	3.6	3.8	4.2	4.6
Total assets	**10.9**	**13.7**	**17.4**	**18.5**	**15.4**	**15.7**	**15.8**	**15.9**
Equity	1.1	6.0	5.0	8.5	8.3	8.4	9.1	10.1
Minority Interests	-	-	-	-	-	-	-	-
Provisions & Other L/T Liabilities	0.1	0.1	0.4	0.4	0.3	0.3	0.3	0.3
Other Non Current Liabilities	-	-	-	-	-	-	-	-
Net financial debt	8.5	4.8	10.7	8.0	5.5	5.9	5.0	3.9
Current Liabilities	1.3	2.8	1.3	1.6	1.3	1.2	1.5	1.6
Equity & Total Liabilities	**10.9**	**13.7**	**17.4**	**18.5**	**15.4**	**15.7**	**15.8**	**15.9**

P&L (EUR Mn)	2015	2016	2017	2018	2019	2020e	2021e	2022e	CAGR 15-19	CAGR 19-22e
Total Revenues	**1.9**	**2.5**	**2.6**	**3.1**	**3.3**	**4.7**	**6.7**	**7.4**	***14.2%***	***30.9%***
Total Revenues growth	*13.5%*	*29.2%*	*4.1%*	*16.7%*	*8.4%*	*41.9%*	*42.6%*	*10.8%*		
COGS	(1.1)	(2.1)	(2.8)	(1.4)	(1.1)	(1.1)	(1.8)	(1.9)		
Gross Margin	**0.8**	**0.4**	**(0.2)**	**1.7**	**2.2**	**3.6**	**5.0**	**5.5**	***27.6%***	***35.5%***
Gross Margin/Revenues	*42.9%*	*16.3%*	*n.a.*	*54.5%*	*66.9%*	*77.3%*	*73.9%*	*74.2%*		
Personnel Expenses	(1.7)	(2.3)	(2.8)	(2.7)	(2.7)	(2.8)	(3.0)	(3.1)		
Other Operating Expenses	(1.2)	(1.4)	(1.4)	(1.3)	(1.3)	(1.1)	(1.2)	(1.2)		
Recurrent EBITDA	**(2.1)**	**(3.3)**	**(4.5)**	**(2.3)**	**(1.7)**	**(0.3)**	**0.8**	**1.2**	***4.2%***	***39.2%***
Recurrent EBITDA growth	*-24.0%*	*-60.5%*	*-34.3%*	*47.7%*	*25.3%*	*81.9%*	*361.2%*	*46.9%*		
Rec. EBITDA/Revenues	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*12.3%*	*16.3%*		
Restructuring Expense & Other non-rec.	0.1	0.0	(0.1)	0.3	0.0	0.4	0.1	0.1		
EBITDA	**(2.0)**	**(3.3)**	**(4.5)**	**(2.1)**	**(1.7)**	**0.0**	**0.9**	**1.3**	***2.8%***	***39.9%***
Depreciation & Provisions	(0.9)	(0.9)	(1.8)	(2.4)	(2.7)	(1.6)	(1.6)	(1.5)		
Capitalized Expense	1.8	2.7	3.7	2.6	2.2	1.8	1.6	1.5		
Rentals (IFRS 16 impact)	-	-	-	-	-	-	-	-		
EBIT	**(1.0)**	**(1.5)**	**(2.6)**	**(1.8)**	**(2.3)**	**0.2**	**0.9**	**1.3**	***-23.9%***	***36.6%***
EBIT growth	*8.4%*	*-52.7%*	*-74.8%*	*30.3%*	*-26.7%*	*108.9%*	*345.8%*	*39.5%*		
EBIT/Revenues	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*4.3%*	*13.5%*	*17.0%*		
Impact of Goodwill & Others	-	(0.0)	(0.1)	0.0	(2.5)	-	-	-		
Net Financial Result	(0.1)	(0.2)	(0.4)	(0.3)	(0.2)	(0.1)	(0.1)	(0.1)		
Income by the Equity Method	-	-	-	-	-	-	-	-		
Ordinary Profit	**(1.1)**	**(1.7)**	**(3.1)**	**(2.1)**	**(5.0)**	**0.1**	**0.8**	**1.1**	***-45.5%***	***30.7%***
Ordinary Profit Growth	*-0.1%*	*-55.9%*	*-81.8%*	*32.4%*	*-134.2%*	*101.3%*	*n.a.*	*48.9%*		
Extraordinary Results	-	-	-	-	-	-	-	-		
Profit Before Tax	**(1.1)**	**(1.7)**	**(3.1)**	**(2.1)**	**(5.0)**	**0.1**	**0.8**	**1.1**	***-45.5%***	***30.7%***
Tax Expense	0.6	1.1	1.5	0.9	0.1	(0.0)	(0.1)	(0.1)		
Effective Tax Rate	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*7.5%*	*7.5%*	*7.5%*		
Minority Interests	-	-	-	-	-	-	-	-		
Discontinued Activities	-	-	-	-	-	-	-	-		
Net Profit	**(0.5)**	**(0.6)**	**(1.6)**	**(1.3)**	**(4.8)**	**0.1**	**0.7**	**1.1**	***-77.6%***	***30.4%***
Net Profit growth	*-147.7%*	*-22.2%*	*-177.0%*	*23.9%*	*-286.4%*	*101.2%*	*n.a.*	*48.9%*		
Ordinary Net Profit	**(1.2)**	**(1.8)**	**(3.1)**	**(2.4)**	**(5.0)**	**(0.3)**	**0.6**	**1.0**	***-41.8%***	***30.0%***
Ordinary Net Profit growth	*-4.2%*	*-42.2%*	*-76.2%*	*22.9%*	*-109.5%*	*94.1%*	*316.3%*	*55.1%*		

Cash Flow (EUR Mn)	2015	2016	2017	2018	2019	2020e	2021e	2022e	CAGR 15-19	CAGR 19-22e
Recurrent EBITDA						**(0.3)**	**0.8**	**1.2**	***4.2%***	***39.2%***
Rentals (IFRS 16 impact)						-	-	-		
Working Capital Increase						(0.3)	(0.1)	(0.2)		
Recurrent Operating Cash Flow						**-0.6**	**0.7**	**1.0**	***3.8%***	***35.1%***
CAPEX						(0.1)	(0.1)	(0.1)		
Net Financial Result affecting the Cash Flow						(0.1)	(0.1)	(0.1)		
Tax Expense						0.4	0.3	0.3		
Recurrent Free Cash Flow						**(0.5)**	**0.8**	**1.0**	***9.7%***	***36.2%***
Restructuring Expense & Other non-rec.						0.4	0.1	0.1		
- Acquisitions / + Divestures of assets						(0.2)	-	-		
Extraordinary Inc./Exp. Affecting Cash Flow						-	-	-		
Free Cash Flow						**(0.4)**	**0.9**	**1.1**	***10.5%***	***37.4%***
Capital Increase						-	-	-		
Dividends						-	-	-		
Net Debt Variation						**0.4**	**(0.9)**	**(1.1)**		

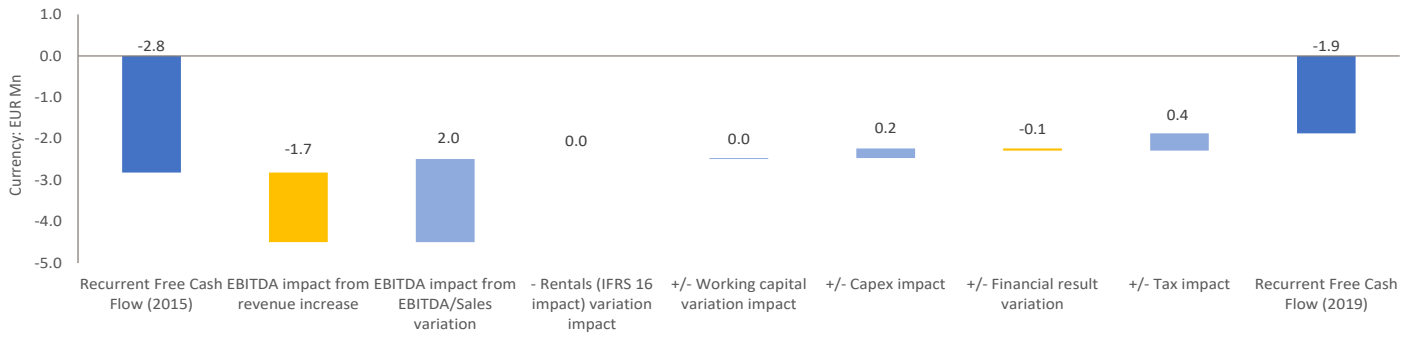
Appendix 2. Free Cash Flow

A) Cash Flow Analysis (EUR Mn)	2016	2017	2018	2019	2020e	2021e	2022e	CAGR 16-19	CAGR 19-22e
Recurrent EBITDA	**(3.3)**	**(4.5)**	**(2.3)**	**(1.7)**	**(0.3)**	**0.8**	**1.2**	***19.3%***	***39.2%***
Recurrent EBITDA growth	*-60.5%*	*-34.3%*	*47.7%*	*25.3%*	*81.9%*	*361.2%*	*46.9%*		
Rec. EBITDA/Revenues	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*12.3%*	*16.3%*		
- Rentals (IFRS 16 impact)	-	-	-	-	-	-	-		
+/- Working Capital increase	1.1	(2.1)	(0.8)	(0.4)	(0.3)	(0.1)	(0.2)		
= Recurrent Operating Cash Flow	**(2.2)**	**(6.6)**	**(3.2)**	**(2.1)**	**(0.6)**	**0.7**	**1.0**	***2.2%***	***35.1%***
Rec. Operating Cash Flow growth	*8.3%*	*-193.7%*	*51.8%*	*33.9%*	*69.7%*	*217.6%*	*30.5%*		
Rec. Operating Cash Flow / Sales	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*11.1%*	*13.1%*		
- CAPEX	(0.5)	(0.2)	(0.0)	(0.0)	(0.1)	(0.1)	(0.1)		
- Net Financial Result affecting Cash Flow	(0.2)	(0.4)	(0.3)	(0.2)	(0.1)	(0.1)	(0.1)		
- Taxes	-	0.4	0.4	0.4	0.4	0.3	0.3		
= Recurrent Free Cash Flow	**(3.0)**	**(6.8)**	**(3.1)**	**(1.9)**	**(0.5)**	**0.8**	**1.0**	***14.9%***	***36.2%***
Rec. Free Cash Flow growth	*-7.7%*	*-124.1%*	*54.2%*	*40.0%*	*74.7%*	*268.8%*	*22.7%*		
Rec. Free Cash Flow / Revenues	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*11.9%*	*13.2%*		
- Restructuring expenses & others	0.2	1.0	0.4	0.1	0.4	0.1	0.1		
- Acquisitions / + Divestments	-	-	-	-	(0.2)	-	-		
+/- Extraordinary Inc./Exp. affecting Cash Flow	-	-	-	-	-	-	-		
= Free Cash Flow	**(2.8)**	**(5.8)**	**(2.7)**	**(1.8)**	**(0.4)**	**0.9**	**1.1**	***13.9%***	***37.4%***
Free Cash Flow growth	*-0.3%*	*-108.4%*	*53.0%*	*34.9%*	*79.8%*	*343.7%*	*20.2%*		
Recurrent Free Cash Flow - Yield (s/Mkt Cap)	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*3.0%*	*3.7%*		
Free Cash Flow Yield (s/Mkt Cap)	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*3.3%*	*4.0%*		

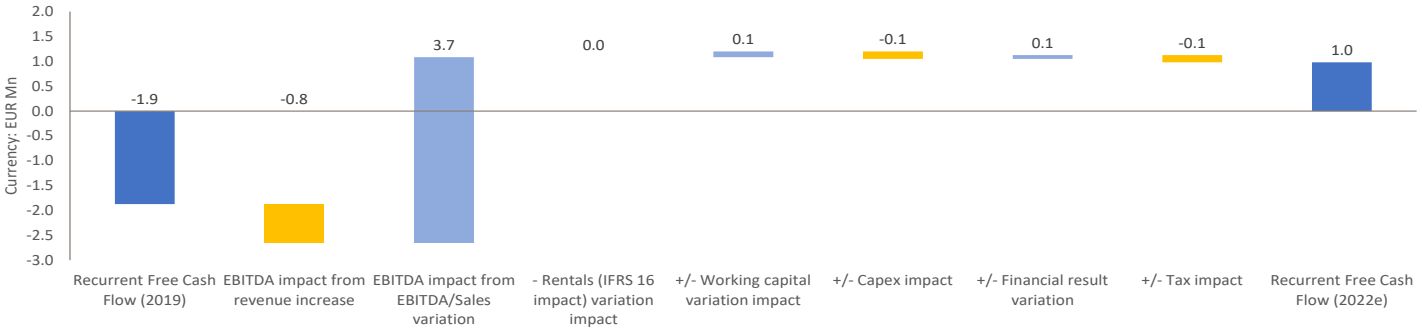
B) Analytical Review of Annual Recurrent Free Cash Flow Performance (Eur Mn)	2016	2017	2018	2019	2020e	2021e	2022e
Recurrent FCF(FY - 1)	**(2.8)**	**(3.0)**	**(6.8)**	**(3.1)**	**(1.9)**	**(0.5)**	**0.8**
EBITDA impact from revenue increase	(0.6)	(0.1)	(0.7)	(0.2)	(0.7)	(0.1)	0.1
EBITDA impact from EBITDA/Sales variation	(0.6)	(1.0)	2.9	0.8	2.2	1.3	0.3
= Recurrent EBITDA variation	**(1.3)**	**(1.1)**	**2.1**	**0.6**	**1.4**	**1.1**	**0.4**
- Rentals (IFRS 16 impact) variation impact	-	-	-	-	-	-	-
+/- Working capital variation impact	1.5	(3.2)	1.3	0.5	0.0	0.2	(0.2)
= Recurrent Operating Cash Flow variation	**0.2**	**(4.3)**	**3.4**	**1.1**	**1.5**	**1.4**	**0.2**
+/- CAPEX impact	(0.3)	0.4	0.1	0.0	(0.1)	(0.0)	(0.0)
+/- Financial result variation	(0.1)	(0.2)	0.1	0.2	0.1	0.0	0.0
+/- Tax impact	-	0.4	0.0	(0.0)	(0.0)	(0.1)	(0.1)
= Recurrent Free Cash Flow variation	**(0.2)**	**(3.8)**	**3.7**	**1.2**	**1.4**	**1.3**	**0.2**
Recurrent Free Cash Flow	**(3.0)**	**(6.8)**	**(3.1)**	**(1.9)**	**(0.5)**	**0.8**	**1.0**

C) "FCF to the Firm" (pre debt service) (EUR Mn)	2016	2017	2018	2019	2020e	2021e	2022e	CAGR 16-19	CAGR 19-22e
EBIT	**(1.5)**	**(2.6)**	**(1.8)**	**(2.3)**	**0.2**	**0.9**	**1.3**	***-15.5%***	***36.6%***
** Theoretical Tax rate*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*7.5%*	*7.5%*		
= Taxes (pre- Net Financial Result)	-	-	-	-	-	(0.1)	(0.1)		
Recurrent EBITDA	**(3.3)**	**(4.5)**	**(2.3)**	**(1.7)**	**(0.3)**	**0.8**	**1.2**	***19.3%***	***39.2%***
- Rentals (IFRS 16 impact)	-	-	-	-	-	-	-		
+/- Working Capital increase	1.1	(2.1)	(0.8)	(0.4)	(0.3)	(0.1)	(0.2)		
= Recurrent Operating Cash Flow	**(2.2)**	**(6.6)**	**(3.2)**	**(2.1)**	**(0.6)**	**0.7**	**1.0**	***2.2%***	***35.1%***
- CAPEX	(0.5)	(0.2)	(0.0)	(0.0)	(0.1)	(0.1)	(0.1)		
- Taxes (pre- Financial Result)	-	-	-	-	-	(0.1)	(0.1)		
= Recurrent Free Cash Flow (To the Firm)	**(2.8)**	**(6.7)**	**(3.2)**	**(2.1)**	**(0.7)**	**0.5**	**0.7**	***9.1%***	***32.9%***
Rec. Free Cash Flow (To the Firm) growth	*-4.2%*	*-141.5%*	*52.5%*	*34.5%*	*65.3%*	*174.6%*	*34.2%*		
Rec. Free Cash Flow (To the Firm) / Revenues	n.a.	n.a.	n.a.	n.a.	n.a.	8.1%	9.8%		
- Acquisitions / + Divestments	-	-	-	-	(0.2)	-	-		
+/- Extraordinary Inc./Exp. affecting Cash Flow	-	-	-	-	-	-	-		
= Free Cash Flow "To the Firm"	**(2.8)**	**(6.7)**	**(3.2)**	**(2.1)**	**(1.0)**	**0.5**	**0.7**	***9.1%***	***32.9%***
Free Cash Flow (To the Firm) growth	*-4.2%*	*-141.5%*	*52.5%*	*34.5%*	*53.6%*	*155.8%*	*34.2%*		
Rec. Free Cash Flow To the Firm Yield (o/EV)	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*1.9%*	*2.5%*		
Free Cash Flow "To the Firm" - Yield (o/EV)	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*1.9%*	*2.5%*		

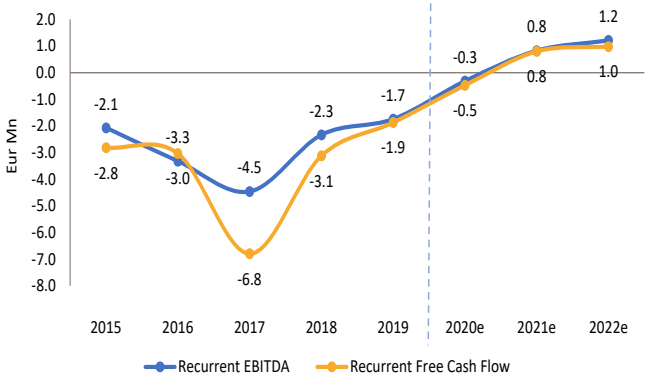
Recurrent Free Cash Flow accumulated variation analysis (2015 - 2019)



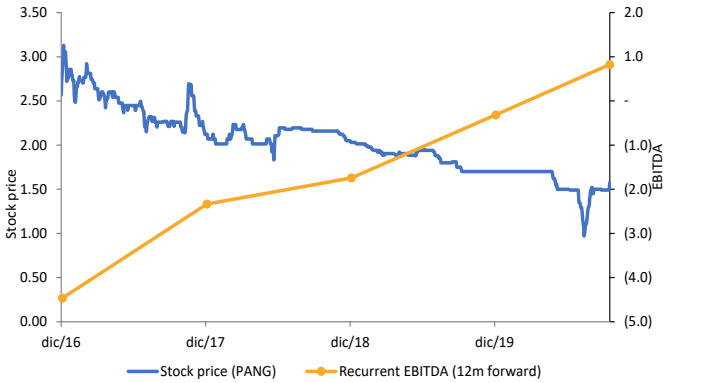
Recurrent Free Cash Flow accumulated variation analysis (2019 - 2022e)



Recurrent EBITDA vs Recurrent Free Cash Flow



Stock performance vs EBITDA 12m forward



Appendix 3. EV breakdown at the date of this report

	EUR Mn	Source
Market Cap	26.7	
+ Minority Interests	-	12m Results 2019
+ Provisions & Other L/T Liabilities	0.3	12m Results 2019
+ Net financial debt	5.5	12m Results 2019
- Financial Investments	0.0	12m Results 2019
+/- Others	(3.1)	12m Results 2019
Enterprise Value (EV)	**29.3**	

Note: Others include tax loss carryforwards

Appendix 4. Historical performance(1)

Historical performance (EUR Mn)	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020e	2021e	2022e	CAGR 12-19	CAGR 19-22e
Total Revenues				**2.6**	**3.1**	**1.7**	**1.9**	**2.5**	**2.6**	**3.1**	**3.3**	**4.7**	**6.7**	**7.4**	***3.4%***	***30.9%***
Total Revenues growth				*n.a.*	*17.7%*	*-44.4%*	*13.5%*	*29.2%*	*4.1%*	*16.7%*	*8.4%*	*41.9%*	*42.6%*	*10.8%*		
EBITDA				**(1.2)**	**(0.5)**	**(1.6)**	**(2.0)**	**(3.3)**	**(4.5)**	**(2.1)**	**(1.7)**	**0.0**	**0.9**	**1.3**	***-5.2%***	***39.9%***
EBITDA growth				*n.a.*	*61.2%*	*-237.0%*	*-22.1%*	*-69.4%*	*-37.0%*	*54.0%*	*16.4%*	*102.5%*	*n.a.*	*42.4%*		
EBITDA/Sales				*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*0.9%*	*13.5%*	*17.3%*		
Net Profit				**(0.4)**	**0.1**	**(0.2)**	**(0.5)**	**(0.6)**	**(1.6)**	**(1.3)**	**(4.8)**	**0.1**	**0.7**	**1.1**	***-41.9%***	***30.4%***
Net Profit growth				*n.a.*	*124.9%*	*-289.1%*	*-147.7%*	*-22.2%*	*-177.0%*	*23.9%*	*-286.4%*	*101.2%*	*n.a.*	*48.9%*		
Adjusted number shares (Mn)				0.2	0.2	0.2	0.2	15.0	15.0	15.0	15.0	16.9	16.9	16.9		
EPS (EUR)				-2.55	0.63	-1.20	-2.97	-0.04	-0.11	-0.08	-0.32	0.00	0.04	0.06	*25.6%*	*30.0%*
EPS growth				*n.a.*	*n.a.*	*n.a.*	*n.a.*	*98.7%*	*n.a.*	*23.9%*	*n.a.*	*n.a.*	*n.a.*	*48.9%*		
Ord. EPS (EUR)				-4.30	0.57	-13.18	-7.53	-0.12	-0.21	-0.16	-0.33	-0.02	0.04	0.06	*30.6%*	*29.6%*
Ord. EPS growth				*n.a.*	*n.a.*	*n.a.*	*42.9%*	*98.4%*	*-76.2%*	*22.9%*	*n.a.*	*94.7%*	*n.a.*	*55.1%*		
CAPEX				-	(0.1)	(0.1)	(0.2)	(0.5)	(0.2)	(0.0)	(0.0)	(0.1)	(0.1)	(0.1)		
CAPEX/Sales %)				*0.0%*	*3.5%*	*3.5%*	*12.0%*	*21.8%*	*5.9%*	*0.9%*	*0.0%*	*2.0%*	*2.0%*	*2.0%*		
Free Cash Flow				**(0.1)**	**(0.8)**	**(1.9)**	**(2.8)**	**(2.8)**	**(5.8)**	**(2.7)**	**(1.8)**	**(0.4)**	**0.9**	**1.1**	***-52.7%***	***37.4%***
ND/EBITDA (x)(3)				*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	5.5x	3.1x		
P/E (x)				*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	37.4x	25.1x		
EV/Sales (x)				*0.00x*	*0.00x*	*0.00x*	*0.00x*	*13.82x*	*12.59x*	*11.12x*	*9.38x*	*6.24x*	4.37x	3.95x		
EV/EBITDA (x)(3)				*0.0x*	*0.0x*	*0.0x*	*0.0x*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	32.5x	22.8x		
Absolute performance									*-22.0%*	*-4.3%*	*-16.3%*	*-7.1%*				
Relative performance vs Ibex 35									*-27.4%*	*12.6%*	*-25.2%*	*30.2%*				

Note 1: The multiples are historical, calculated based on the price and EV at the end of each year, except (if applicable) in the current year, when multiples would be given at current prices. The absolute and relative behavior corresponds to each exercise (1/1 to 31/12). The source, both historical multiples and the evolution of the price, is Thomson Reuters.

Note 2: All ratios and multiples on EBITDA refer to total EBITDA (not to recurrent EBITDA).

Appendix 5. Main Competitors 2020e

		Molecular Diagnostic Laboratories								Advanced Medical Equipment						Global Leader	
	EUR Mn	Biocept	MDXHEALTH SA	Biocartis	Atrys Health	Guardant Health Inc	Exact Sciences Corp	Neogenomics Inc.	Average	Thermo Fischer	Qiagen	Danaher	Agilent	Becton Dickinson	Average	ROCHE	PANG
Market data	Ticker (Reuters)	BIOC.O	MDXH.BR	BCART.BR	ATRY.MC	GH.O	EXAS.O	NEO.O		TMO	QGEN.K	DHR	A	BDX		ROG.S	PANGO.MC
	Country	USA	Belgium	Belgium	Spain	USA	USA	USA		USA	Netherlands	USA	USA	USA		Switzerland	Spain
	Market cap	54.5	55.3	282.9	252.8	8,700.5	13,164.3	4,145.1		156,991.6	10,360.3	136,608.9	27,738.8	58,193.9		248,566.6	26.7
	Enterprise value (EV)	36.1	44.2	297.5	250.8	7,942.4	13,451.3	4,038.9		170,228.4	11,181.8	153,802.5	28,563.2	71,706.6		259,861.8	29.3
Basic financial information	Total Revenues	7.0	23.4	46.7	15.0	236.2	1,145.2	383.0		24,596.2	1,533.0	18,182.7	4,471.9	14,235.8		57,404.2	4.7
	Total Revenues growth	*42.9%*	*122.1%*	*24.8%*	*1.1%*	*23.5%*	*46.5%*	*5.0%*	*38.0%*	*7.9%*	*12.6%*	*13.8%*	*-3.4%*	*-10.3%*	*4.1%*	*1.3%*	*41.9%*
	2y CAGR (2020e - 2022e)	*95.8%*	*19.2%*	*41.1%*	*n.a.*	*31.5%*	*29.1%*	*14.8%*	*38.6%*	*5.3%*	*5.6%*	*9.5%*	*7.4%*	*7.2%*	*7.0%*	*3.7%*	*25.7%*
	EBITDA	n.a.	(13.1)	(45.6)	3.0	(123.4)	(120.1)	24.4		6,896.0	603.6	4,892.9	1,185.5	3,953.2		23,276.3	0.0
	EBITDA growth	*n.a.*	*n.a.*	*0.6%*	*12.1%*	*-94.9%*	*26.6%*	*-47.3%*	*-20.6%*	*18.2%*	*24.4%*	*23.0%*	*1.8%*	*-16.9%*	*10.1%*	*2.9%*	*102.5%*
	2y CAGR (2020e - 2022e)	*n.a.*	*62.2%*	*38.7%*	*n.a.*	*45.4%*	*90.6%*	*99.3%*	*67.2%*	*6.1%*	*5.4%*	*13.8%*	*9.0%*	*15.2%*	*9.9%*	*6.4%*	*n.a.*
	EBITDA/Revenues	*n.a.*	*n.a.*	*n.a.*	*20.0%*	*n.a.*	*n.a.*	*6.4%*	*13.2%*	*28.0%*	*39.4%*	*26.9%*	*26.5%*	*27.8%*	*29.7%*	*40.5%*	*0.9%*
	EBIT	(20.3)	(10.0)	(55.5)	1.0	(136.8)	(227.5)	(7.4)		6,169.5	505.6	4,215.4	1,058.9	3,291.3		19,796.9	0.2
	EBIT growth	*1.2%*	*50.0%*	*0.3%*	*-17.7%*	*-86.1%*	*-9.1%*	*-138.3%*	*-28.5%*	*62.3%*	*81.3%*	*44.5%*	*11.5%*	*22.3%*	*44.4%*	*6.0%*	*108.9%*
	2y CAGR (2020e - 2022e)	*25.5%*	*58.2%*	*29.2%*	*n.a.*	*31.6%*	*48.4%*	*n.a.*	*38.6%*	*6.0%*	*4.0%*	*13.8%*	*10.5%*	*15.4%*	*10.0%*	*7.3%*	*n.a.*
	EBIT/Revenues	*n.a.*	*n.a.*	*n.a.*	*6.7%*	*n.a.*	*n.a.*	*n.a.*	*6.7%*	*25.1%*	*33.0%*	*23.2%*	*23.7%*	*23.1%*	*25.6%*	*34.5%*	*4.3%*
	Net Profit	(22.3)	(16.5)	(63.5)	-	(129.8)	(305.1)	4.8		5,368.2	408.2	3,451.5	856.7	2,384.2		15,693.7	0.1
	Net Profit growth	*-0.4%*	*-57.0%*	*-0.9%*	*n.a.*	*114.4%*	*307.1%*	*-32.8%*	*55.1%*	*62.5%*	*n.a.*	*59.1%*	*-10.8%*	*119.6%*	*57.6%*	*20.7%*	*101.2%*
	2y CAGR (2020e - 2022e)	*28.6%*	*48.7%*	*25.6%*	*n.a.*	*28.3%*	*67.9%*	*n.a.*	*39.8%*	*6.8%*	*3.3%*	*14.5%*	*12.3%*	*18.3%*	*11.0%*	*8.0%*	*n.a.*
	CAPEX/Sales %	*n.a.*	*n.a.*	*-18.6%*	*n.a.*	*-6.2%*	*-7.8%*	*-4.6%*	*-9.3%*	*-4.5%*	*-8.3%*	*-3.3%*	*-2.5%*	*-4.7%*	*-4.7%*	*-6.6%*	*-2.0%*
	Free Cash Flow	n.a.	n.a.	(61.0)	n.a.	(107.2)	(106.5)	n.a.		3,930.3	345.1	3,542.6	679.0	2,352.5		15,635.7	(0.4)
	Net financial debt	n.a.	n.a.	(79.0)	21.0	(732.9)	339.6	(47.1)		10,783.5	828.6	13,774.5	622.1	11,998.2		(3,278.0)	5.9
	ND/EBITDA (x)	n.a.	n.a.	n.a.	7.0	n.a.	n.a.	(1.9)	2.5	1.6	1.4	2.8	0.5	3.0	1.9	(0.1)	n.a.
	Pay-out	*n.a.*	*n.a.*	*0.0%*	*n.a.*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*5.6%*	*0.0%*	*12.6%*	*22.3%*	*33.0%*	*14.7%*	*47.0%*	*0.0%*
Multiples and Ratios	P/E (x)	2.1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	2.1	29.2	25.5	40.9	32.6	23.7	30.4	15.7	n.a.
	P/BV (x)	n.a.	n.a.	12.5	4.8	7.3	6.3	7.7	7.7	5.7	4.4	4.4	6.4	2.7	4.7	6.5	3.2
	EV/Revenues (x)	5.1	1.9	6.4	16.7	33.6	11.7	10.5	12.3	6.9	7.3	8.5	6.4	5.0	6.8	4.5	6.2
	EV/EBITDA (x)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	24.7	18.5	31.4	24.1	18.1	23.4	11.2	n.a.
	EV/EBIT (x)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	27.6	22.1	36.5	27.0	21.8	27.0	13.1	n.a.
	ROE	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	n.a.	*19.6*	*15.9*	*12.6*	*19.6*	*11.3*	15.8	*45.7*	*0.7*
	FCF Yield (%)	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	*n.a.*	n.a.	*2.5*	*3.3*	*2.6*	*2.5*	*4.1*	3.0	*6.3*	*n.a.*
	DPS	*n.a.*	*n.a.*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.75*	*0.00*	*0.61*	*0.61*	*2.92*	*0.98*	*8.62*	*0.00*
	Dvd Yield	*n.a.*	*n.a.*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*0.2%*	*0.0%*	*0.3%*	*0.7%*	*1.5%*	*0.5%*	*3.0%*	*0.0%*

Note 1: Financial data, multiples and ratios based on market consensus (Thomson Reuters). In the case of the company analyzed, own estimates (Lighthouse).

Note 2: All ratios and multiples on EBITDA refer to total EBITDA (not to recurrent EBITDA).

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Date of report	Recommendation	Price (EUR)	Target price (EUR)	Period of validity	Reason for report	Analyst
16-Oct-2020	n.a.	1.58	n.a.	n.a.	Initial Coverage	Ana Isabel González García, CIIA