Hardman & Co Virtual Investor Forum

Join us for our first virtual Investor Forum on Thursday 9th July 2020, at 3:00pm.

Hardman has been holding investor forums for over six years, giving all types of serious investors the opportunity to meet company managements, hear their stories and pose questions.

This week we will hold our first virtual forum. The atmosphere will be slightly different to our physical forums, but the aim will be true to the original concept.

In this pack you will find profiles of the company speakers and brief notes from our analysts on each of the companies presenting. I would encourage you to read these before the forum to get the most out of the event.

During the forum we will conduct a number of polls; we will also be collecting feedback in other ways. These are excellent ways to influence management.

You are also invited to submit your questions to management before the forum (click here to send them in) and during presentations, using the Q&A function in the webinar.

The presentation decks used by the companies will not only be available during the forum, but also downloadable afterwards.

For professional investors, the forum has been authorised to count towards your Continuing Professional Development time. If you would like a CPD certificate, send an email asking for such to Larissa Adams (*la@hardmanandco.com*).

I hope you enjoy the event. I'm sorry I won't be able to enjoy a glass of wine with you all afterwards!

Keith Hiscock – CEO, Hardman & Co

HARDMAN&CO.

Chair of the Forum

Keith Hiscock

CEO, Hardman & Co

Keith is personally responsible for the firm's relationships with its corporate clients and also for corporate finance. In addition, he is the author of several articles tackling the issues facing companies in today's climate. Keith has more than 35 years' stockbroking experience and has developed long-standing relationships with many major institutional investors, including Private Client Brokers and Wealth Managers. He started his career at James Capel, at the time the top-ranked research house in London. He was a founding member of Schroder Securities and of Agency Partners, a leading research boutique house, and was a member of the five-man securities board at Evolution. Keith was part of the group of investors that acquired Hardman & Co in late 2012. He holds an MA in Philosophy, Politics & Economics from the University of Oxford.

Q&A Host

Richard Angus

Head of Business Development, Hardman & Co

Richard has more than 30 years of City experience. His primary focus has been US equity capital markets, and he has been involved predominantly in the development of growth companies. He has experience on both the buy and sell sides. Having worked for M&G as a fund manager, Richard then worked for US investment banks Alex Brown & Sons and Furman Selz. Latterly, he was Managing Director and Head of Institutional Sales for Europe at FBR & Co. Besides being involved in many public flotations, Richard's experience includes pre-IPO capital raises. He joined Hardman & Co in September 2014. He holds a BA (Hons) in Economics from the University of Liverpool and is a Chartered Accountant.

Company Speakers

Paul Bridge

CEO, Civitas Investment Management

Paul is a founder of CIM and has over 20 years' experience working at a senior level in the social housing sector. During his career, Paul has held a variety of non-executive roles in and out of the sector, including Chairman of Thames Valley Charitable Housing Association, Chief Executive of Homes for Haringey, a Registered Provider, where he was responsible for 800 staff and 21,000 homes, and Director at Hyde Group, a major G15 Housing Association.

Neil Sinclair

Chief Executive, Palace Capital plc

Neil has over 50 years' experience across a variety of leadership roles in the property sector. He is currently CEO of Palace Capital plc, the UK REIT that has a diversified portfolio of UK regional commercial real estate, which was admitted to the LSE's main market in 2010. Known for his extensive charity work, he is a co-founder of 'the PROPS', one of the industry's leading events, which has raised nearly £11 million, mainly for Variety Children's Charity Wheelchair Programme.

Stephen Silvester

Finance Director, Palace Capital plc

Stephen is a Chartered Accountant with 15 years' experience in finance including 10 in real estate. He first worked at Menzies before moving to Australia where he was a senior accountant at PKF and Group Financial Controller at St Hilliers Pty. Back in the UK, he served as Group Financial Controller at NewRiver REIT. His experience encompasses property finance including capital raising (debt and equity markets), hedging, securing credit facilities (investment and development finance) as well as listed corporate experience including investor relations, REIT compliance and corporate transactions.

Cathal Friel

Executive Chairman, Open Orphan

Cathal was a Co-founder and original board member of Amryt Pharma Plc, a leading European orphan drug company listed on the London Stock Exchange. He established Raglan Capital in 2007 and helped establish Open Orphan in 2016. He was the Founder and Chairman of Fastnet Oil & Gas plc which listed in 2012 and raised $50m in equity on the AIM market, and he was Co-founder and Director of Merrion Stockbrokers in 2000 which was successfully sold for €80m in 2006.

Marcus Edwards-Jones

Chairman, Phoenix Copper Ltd

Marcus has significant experience in global institutional capital raisings. He is Managing Director of Lloyd Edwards-Jones S.A.S., a Paris and Dubai-based finance boutique specialising in selling equities to institutional clients and advising resources companies. Marcus graduated from Oxford University with an MA in Ancient and Modern History. He recently served as a Non-Executive Director of Georgian Mining Corporation.

Ryan McDermott

Chief Executive, Phoenix Copper Ltd

With over 25 years' experience in the base and precious metals mining industry, Ryan has held positions including Director of Mining Operations in Idaho and Montana; General Manager; and Project Manager in western USA and in Alaska. He has worked for Kinross Gold, Plexus/Sovereign, and Kleinfelder West. He was recently responsible for permitting a new mine into production in Idaho for GHRMC. Ryan graduated from Idaho State University with a B.Sc. degree in Geology and joined Phoenix Copper in March 2017.

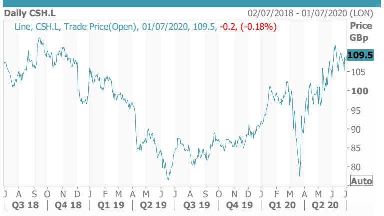
Company research from Hardman & Co analysts

Click on the title to jump to each note.

HARDMAN & CO.

HARDMAN & CO.

Real estate



Source: Refinitiv

Market data

EPIC/TKR	**CSH**
Price (p)	**110**
12m High (p)	111
12m Low (p)	78
Shares (m)	621.6
Mkt Cap (£m)	683
EV (£m)	893
Free Float*	99%
Market	AIM

**As defined by AIM Rule 26*

Description

Civitas is a healthcare residential REIT property, leased to 20-plus years' term, all with CPI-linked rental income. It works closely with care providers, but has no occupancy-related risk. Civitas operates in a growth sector.

Company information

CEO of advisers	Paul Bridge
Manager	Andrew Dawber
Chairman NED	Michael Wrobel

+44 20 3058 4844
www.civitassocialhousing.com

Key shareholders

Investec Wealth	10.1%
MFS International	6.4%
East Riding Yorks Pension	6.1%
Aberdeen Standard	5.1%
Massachusetts Fin. Serv.	5.0%
FIL Investment	5.0%

Diary

30 Jun	Full-year results
Aug'20	NAV update
Nov'20	NAV update

Analyst

Mike Foster 020 7194 7622
mf@hardmanandco.com

CIVITAS SOCIAL HOUSING

Index-linked, government-derived income

Civitas derives income ultimately from government payments – predominantly housing benefits. Its portfolio accommodates younger adults with multiple health vulnerabilities. The impact of COVID-19 has been nil, to date, as the income underpins the long-lease rental contracts into which the lessees enter. These are all CPI-linked and typically are of 20 years' term or longer. In a third of cases, the care provider also underwrites the rent payments, in addition to the social housing provider lessee. Civitas is not a passive investor, but takes no development or care risk and, once the lease is signed, it takes no occupancy risk.

- **Strategy and dividends:** Civitas's property provides a cost-effective and clinically superior alternative to institutional care, in a model with cross-party political support. It generated EPRA EPS of 96% the level of dividend payout in 1H'20, rising to 97% in 3Q'20. The current run rate now achieves 100% cover.

- **Capital deployment:** Civitas's investment into the long-dated, index-linked assets is moving towards its stated 35% LTV target. Current acquisitions, and the move to 35% LTV, will principally be newly bespoke higher acuity facilities from third-party specialist developers or care providers, we believe.

- **Valuation and business model:** The stable, rising, long-lease income is inflation-linked. The balance sheet is strong, and covenants have strengthened significantly in the past year. This sector is the first to emerge from the COVID-19 blanket "Material Uncertainty Clause", which the RICS, the valuers' body, mandated.

- **Risks:** Demand is uncorrelated to the economy, but, as with all real estate, the counterpart is crucial. In 2019, some assets were novated to new housing association lessees. The Regulator published a report on this new sector. We see the higher-acuity expansion as an important and focused deepening.

- **Investment summary:** Evolution of the business model is important to note. Assets drive the model – this is a real estate investing company – but Civitas works very closely with the care providers – each house having its own bespoke occupier needs. It is building on this expertise, expanding to higher-acuity assets, with strong partners. A significant positive social impact is generated.

Financial summary and valuation

Year-end Mar (£000)	2018	2019	2020E	2021E	2022E
Revenue	18,606	35,738	46,310	52,180	55,560
EPRA EBIT	9,713	26,096	36,670	42,950	46,140
Revaluation	30,633	3,652	8,360	10,700	17,660
Finance cost	-628	-3,484	-7,480	-8,750	-9,710
C share amortisation*	-2,792	-6,400	0	0	0
Reported profits	36,926	19,864	37,550	44,900	54,090
Statutory EPS (p)	10.6	4.7	6.1	7.3	8.6
EPRA EPS (p)	1.4	3.6	4.7	5.5	5.9
DPS (p)	4.2	5.0	5.3	5.4	5.5
Net (debt)/ cash	150,868	-161,319	-209,040	-310,700	-320,000
EPRA NAV	105.5	107.1	107.8	109.7	112.9
Dividend yield	3.8%	4.6%	4.8%	4.9%	5.0%

**Non-cash accounting of income and assets from follow-on equity; Source: Hardman & Co Research*

Strategy

First UK healthcare-housing REIT

Housing associations and care providers provide covenant support

Civitas Social Housing was created in 2016 as the first dedicated London-listed REIT, to invest in care-based social homes and healthcare facilities. The average occupier age is 32. Income is from long-term leases, not related to occupancy. Demographic-related demand for accommodation is high. Most recently, it has extended its mandate to be able to work directly with leading care-based organisations.

Occupier outcomes, assets, evolution of the model

Sector in significantly rising demographic-led demand

Civitas's housing stock provides a cost-effective alternative to hospitals for young adults with medical needs, including learning difficulties. The assets are leased out to housing associations on long-term CPI-inflating leases. Around 14% of UK social housing is represented by supported housing: a small but fast-growing segment.

Evolution towards higher-acuity accommodation

The housing stock does require specific and relatively extensive re-configuration, which is structural in nature. More explanation of "adaptations" can be found here. Civitas does not develop; it buys from developers and care providers, involving forward purchases. Facilities now extend to high-acuity assets. The largest – in Wales – is set to complete later this calendar year, and is an important evolution. Civitas is still not taking occupancy risk, and it enters into a long-term fixed uplift lease, but the close knowledge of the care providers and the building requirements have enabled this move into a closely allied area, with strong demand-led growth and higher-value properties. There will be further capital allocated to this higher-acuity asset class, where Civitas works closely with its selected care providers, with Civitas finding the buildings, specifying the adaptations required, and bringing in housing associations.

Government funding to lessees

Funding of the lessees – the housing associations – is through housing benefit. There have been specific political policy rulings that this should not be included in changes being made into universal credit regimes.

Execution and dividends

Two large equity raises now fully deployed and investing towards 35% LTV target

Wide range of counterparts

£350m equity capital was raised at an oversubscribed November 2016 IPO, and a subsequent secondary raise of £302m took place a year later. The pre-results update confirmed total invested capital since IPO reaching £789m, made up of 613 properties, fully let to 15 housing associations, supported by 117 care providers in 164 local authorities. There are over 4,200 individual tenants, with a market share of under 1%.

Competitive cost of debt

Average cost of debt stood at 2.46% at the end of fiscal 2020, with a 3.4-year term. This competitive cost of dept indicates covenant strength.

Raised dividend target

With dividends expected to be 100% covered, the target growth for 2021 has been raised, with the dividend expected to reach 5.4p that year.

Social impact

Positive social impact with analysis and quantification of impact

Significant positive social impact is generated. Civitas publishes a social impact report (compiled by a specialist third-party provider) twice yearly, which is worth consulting. There is more information here, with the latest version available.

Civitas's not-for-profit company to benefit society and support covenant strength

The Social Housing Family CIC is a recently formed, not-for-profit community interest company established by Civitas, but operationally independent, whose stated aim is to enable housing associations holding Civitas leases to increase skills and experience, and to provide funding, if required, to promote enhanced performance.

Government regulator's role includes support of corporate governance within housing association sector

The social housing sector is regulated by a government agency, including the specialist supported social housing that Civitas provides. The social housing sector is a stable partner for local authorities, occupiers, investors and other stakeholders. Some individual registered providers may encounter difficulties, but providers have not defaulted. Regulatory interventions assist corporate governance and are materially beneficial, especially to smaller organisations. Supported social housing is fast-growing, and many housing associations participating are specialist and moderately sized. The operational standards of the sector are high.

Valuation

First sector to have COVID-19- related "Material Uncertainty" clause removed

At end-4Q'20 (March 2020), the net initial yield (NIY) of the portfolio stood at 5.26%. There has been an element of yield compression since the time of acquisitions following the IPO, which achieved typically 6%-plus. As we have pointed to as significant, this sector has been the first to emerge from the "Material Uncertainty Clause" that the valuers' body, RICS, mandated, in response to the pausing of real estate markets consequent to COVID-19. This points to the RICS considering there to be a deep and liquid market in this relatively young asset class. Civitas's purchases are prospectively slowing as a result of it moving towards its 35% gearing target. Incremental assets drive much more into the higher-acuity assets.

Peer group: historical valuation ratios and share price performance

REIT	Share price (p)	Price/ EPRA NAV	Dividend yield	Share price change past 12 months
Average secure income REIT Hardman "Basket"*	95	105%	5.0%	-7.0%
Impact Healthcare	95	89%	6.5%	-15%
Target Healthcare	110	102%	6.1%	-5%
Triple Point Social Housing	99	95%	5.1%	+19%
Civitas Social Housing	110	103%	4.6%	+37%

Source: Hardman & Co Research

**Hardman & Co published research in March 2019, "Secure income" REITs – Safe Harbour Available, and May 2020, Safer harbour REITs: an update, including a basket of 16 UK REITs that seek to generate secure income streams as their primary investment mission. A list of these REITs can be found in the May report. Data are historical, and the "Basket" is estimated to see a 10% dividend cut in 2020. Data relate to the weighted average for this basket of 16 REITs, which includes Civitas Social Housing REIT.*

Managers

Civitas Social Housing REIT externally managed by recently renamed Civitas Investment Management Ltd

Civitas Social Housing REIT is externally managed by Civitas Investment Management Ltd. It is of interest that the adviser was, until recently, named Civitas Housing Advisors. Residential remains the core competence, and this has extended to work directly with the NHS and other leading care-based organisations, as well as higher- acuity accommodation and facilities.

Five non-executive independent directors of Civitas Social Housing oversee the management. Chair is Michael Wrobel, former director of the Association of Investment Companies, and a director of several investment trusts, who has 30 years' experience of investment management. The manager's CEO is Paul Bridge, a leading industry director, previously CEO of Homes for Haringey, and non-executive chairman of the Metropolitan Thames Valley Housing Association.

Fees are 1% of net assets to £250m, then tiered to run to 0.7% of net assets over £1bn.

SWOT analysis	
Strengths	100% rent funded from government-underpinned income streams; all leases CPI-linked, long-term; COVID-19 resilience; nil GDP correlation
Weaknesses	Certain lessees are small organisations – but profile has improved
Opportunities	Expanding into higher-acuity assets, which may have more valuation upside
Threats	Regulation changes; interest re-finance 2023

Source: Hardman & Co Research

Investment conclusion

Tested, refined, evolved model

- This model has been refined, through expertise gained in specifying and managing clinical assets, strengthening Civitas's proposition to all stakeholders, including, importantly, Local Authorities' commissioning officers.

Government income, but not government-guaranteed in any way

- It is important to note that income streams are funded by the government, but these pass through local government and the lessees, the housing associations, which are closely government-regulated but not government-guaranteed

2019 strengthening of model

- Civitas has re-assigned some of its leases, strengthening the mix. One small housing association constituted ca.20% of the rent roll in March 2019, and has now reduced to ca.6%. It is noteworthy and should be emphasised that this was all achieved on the same terms – rent and length of lease – as the original lease. Civitas has shown resilience in engaging with stakeholders, including the Regulator, and has "proven the model" in the past year and more.

Income strength translates to good dividend prospects

- Civitas's income profile is particularly attractive, with long leases (well in excess of 20 years), and all income is CPI-linked and ultimately government-backed.
- It is still optimising the rent roll and gearing, but has now reached 100% dividend cover, on growing payouts per share.

Financial summary and valuation

Year-end Mar (£m)	2018	2019	2020E	2021E	2022E
Revenue	18,606	35,738	46,310	52,180	55,560
Expenses	-8,893	-9,642	-9,640	-9,230	-9,420
Underlying EBIT (pre-revaluation)	9,713	26,096	36,670	42,950	46,140
Revaluation	30,633	3,652	8,360	10,700	17,660
Operating profit	40,346	29,748	45,030	53,650	63,800
Finance cost	-628	-3,484	-7,480	-8,750	-9,710
C share amortisation[1]	-2,792	-6,400	0	0	0
Pre-(and post-) tax profits	36,926	19,864	37,550	44,900	54,090
EPRA earnings [2]	9,085	22,612	29,190	34,200	36,430
EPRA EPS (p)	1.44	3.63	4.69	5.50	5.86
Dividend per share (p)	4.25	5.00	5.30	5.40	5.50
Investment properties	516,222	820,094	865,100	979,480	1,009,920
Net cash/(debt)	150,868	-161,319	-209,040	-310,700	-320,000
Other assets[3]	-297,695	7,733	14,690	13,300	12,090
Net assets	369,395	666,508	670,760	682,080	702,010
NAV per share (p)[4]	105.5	107.1	107.8	109.7	112.9
Shares in issue (average)[5]	350.0	425.4	622.1	621.6	621.6
Shares in issue (year-end)[5]	350.0	622.5	621.6	621.6	621.6
P/NAV (x)	104.1	102.7	101.9	100.3	97.4
Dividend yield	3.8%	4.6%	4.8%	4.9%	5.0%

Source: Hardman & Co Research

[1]Non-cash accounting of income and assets from follow-on equity

[2] Equating to profits after interest pre revaluation of assets, excluding C share accounting (non-cash) amortisation and other adjustments

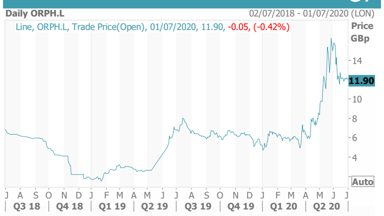
[3]2018 includes £298.7m C shares as balancing accounting debit – ultimately converted to ord. shares

[4]EPRA NAV for Civitas equates to IFRS NAV

[5]Excludes C shares, which were all subsequently converted to ordinary shares

2 July 2020

Pharmaceuticals & Biotechnology



Source: Refinitiv

Market data

EPIC/TKR	**ORPH**
Price (p)	**12.0**
12m High (p)	16.0
12m Low (p)	4.6
Shares (m)	663.9
Mkt Cap (£m)	79.7
EV (£m)	17.0
Free Float*	62.7
Market	93%

**As defined by AIM Rule 26*

Description

Open Orphan (ORPH) is a rapidly growing specialist CRO pharmaceutical services company, which is a world leader in the testing of vaccines and anti-virals through the use of human challenge study models. ORPH is comprised of two specialist CRO services businesses; hVIVO and Venn Life Sciences and has offices in London, Dublin, Paris, and the Netherlands.

Company information

Exec. Chairman	Cathal Friel
CEO	-
CFO	Leo Toole

+353 1 644 0007
www.openorphan.com

Key shareholders

Chairman	6.9%
Invesco	7.9%

Diary

Sep'20	Interim results

Analyst

Dr Martin Hall 020 7194 7722
mh@hardmanandco.com

OPEN ORPHAN

Poised for profitability

ORPH has developed into a specialist pharmaceutical services group through the acquisitions of Venn Life Sciences (Venn LS) and hVIVO, to become a world leader in the testing of vaccines and anti-virals. The original strategy was to build a company generating sales of €40m-€50m within two years, which it looks set to achieve. The enlarged entity has a broad and complementary portfolio of services for its pharmaceutical customers and is on the cusp of reaching profitability. Cost savings and new contract wins should see ORPH turn profitable by the end of fiscal 2020. COVID-19 has brought an unexpected opportunity for the company.

- **Strategy:** ORPH is a contract research organisation (CRO) offering specialist challenge tests to pharmaceutical/biotech companies for the development, among others, of new vaccines and anti-viral drugs. This positions it well for the emerging virus risk management stemming from the COVID-19 pandemic event.

- **Acquisitions:** The past 12 months have seen significant change, with the reverse merger into Venn (June 2019), followed by the acquisition of hVIVO, to create a broad and complementary offering to its enlarged customer base. Its 24-bed quarantine facility is best-in-class for vaccine and virus-related development.

- **Funded to profitability:** Both its challenge study activities and laboratory services divisions are close to covering the fixed and variable costs, i.e. on the cusp of breakeven, which is being accelerated through cost savings and new contracts. The recent funding (€14m) has provided the necessary working capital.

- **Risks:** OPRH is a fast-growing company with an ambitious management team. Despite the significant activities of the past 12 months, the company is likely to take further opportunities should they arise in the fragmented European CRO market. These are likely to require further share issues.

- **Investment summary:** ORPH has made great strides to deliver on its inorganic growth strategy to develop profitable CRO with a broad service offering. Forecasts reflect the expectations for the enlarged entity, but do not include anything for the COVID-19 challenge model opportunity, which could be substantial. Despite this, ORPH is set to report good profits in fiscal 2021.

Financial summary and valuation

Year-end Dec (€m)	ORPH 2019	Venn LS 2019	hVIVO 2019	*Pro forma* 2019	2020E	2021E
Sales	3.84	15.09	8.45	25.66	32.00	45.00
COGS	-	-	-	-21.50	-22.00	-27.00
Operating costs	-9.07	-	-	-13.99	-12.70	-11.50
EBITDA	-4.43	-5.05	-3.79	-10.13	-0.80	8.32
Underlying EBIT	-5.15	-6.47	-5.89	-14.25	-3.00	6.20
Reported EBIT	-6.22	-	-6.87	-16.30	-3.00	6.20
Underlying PBT	-5.55	-	-5.99	-14.47	-3.09	7.10
Statutory PBT	-6.62	-	-6.97	-16.52	-3.09	7.10
Underlying EPS (¢)	-3.31	-	-	-2.72	-0.52	1.07
Statutory EPS (¢)	-3.96	-	-	-3.10	-0.52	1.07
Net cash/(debt)	-2.46	-	-	-0.18	15.91	21.92
Equity issues	5.36	-	-	5.36	20.40	0.00

Source: Hardman & Co Life Sciences Research

Company overview

Background

ORPH was incorporated in the Republic of Ireland on 18 July 2017 with a strategy and product offering to develop a market-leading services platform for drug companies seeking to commercialise their products across Europe with a particular focus on drugs to treat rare diseases. It offered data platforms that could match the needs of 500 pharmaceutical/biotech companies worldwide with about 4,000 physicians and key opinion leaders in Europe focused on orphan drugs.

In Europe, the services market for orphan drugs was, and still is, highly fragmented. A large number of small-scale consultancies existed because of a dysfunctional regulatory system in Europe where, despite an EU-wide regulator, reimbursement needs to be negotiated on a country-by-country basis. ORPH's strategy was to build upon its existing capability and expertise to become a full-service consultancy for orphan and other speciality healthcare products through a focused acquisition strategy.

In May 2019, as part of this acquisition strategy, ORPH reversed into Venn Life Sciences, an experienced CRO with established contacts and contracts with several pharmaceutical companies, in a share swap that valued the companies at £4.0m and £5.7m, respectively.

This was followed in January 2020 with the all-share acquisition of hVIVO, a specialist in "challenge" studies to test the efficacy of vaccines and anti-viral drugs. hVIVO possessed a proprietary portfolio of eight challenge study models, which was a complementary and novel addition to ORPH's offering. To put this in perspective, hVIVO had only two competitors worldwide, each with only one challenge model. hVIVO was a spin-out for Queen Mary University of London (QMUL) and the share swap valued the company at £13.0m.

hVIVO services

Human challenge full-service solution	hVIVO challenge models	Laboratory services
	Influenza (2)	Virology
	Respiratory syncytial virus (RSV) (2)	Immunology
	Human rhinovirus (HRV)	Biomarkers
	Asthma	
	COPD	
Industry leading provider of viral challenge studies	Cough	

Source: Open Orphan

In order to fund its organic and inorganic growth strategy, ORPH has undertaken a number of capital increases over and above the shares issued as part of any acquisition.

Recent funding history

Date	Activity	Gross £m	Net £m
19 Jun 2019	Placing of shares @ 5.6p	4.5	3.6
31 Jan 2020	Placing and Subscription of shares @ 6.1p	5.3	5.0
26 May 2020	Placing and Subscription of shares @ 11.0p	12.6	12.0
Total to date		**22.4**	**20.6**

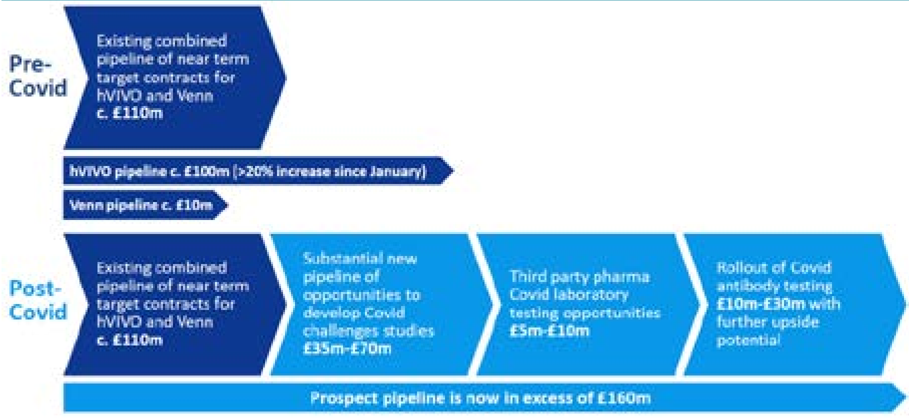
Source: Hardman & Co Life Sciences Research

Opportunity

Following acquisition, management strategy is to integrate the businesses as quickly as possible, reduce the cost base, expand the portfolio of CRO services on offer to customers and to convert the pipeline of prospects into signed contracts. Today, OPRH is a niche, rapid-growth CRO business that is on the cusp of profitability – expected from 3Q'20.

The challenge study models on offer from ORPH can potentially speed up vaccine development and approval by 2-3 years by testing the efficacy on human volunteers over a short period of time in a controlled environment – quarantine clinic. Therefore, the COVID-19 pandemic has provided an incredible opportunity for the group. ORPH is very well positioned to assist with the global need, and level of development activity, with respect to a COVID-19 vaccine. The latest funding round was made to advance the development of the world's first seasonal coronavirus and COVID-19 challenge study models.

Prospect pipeline

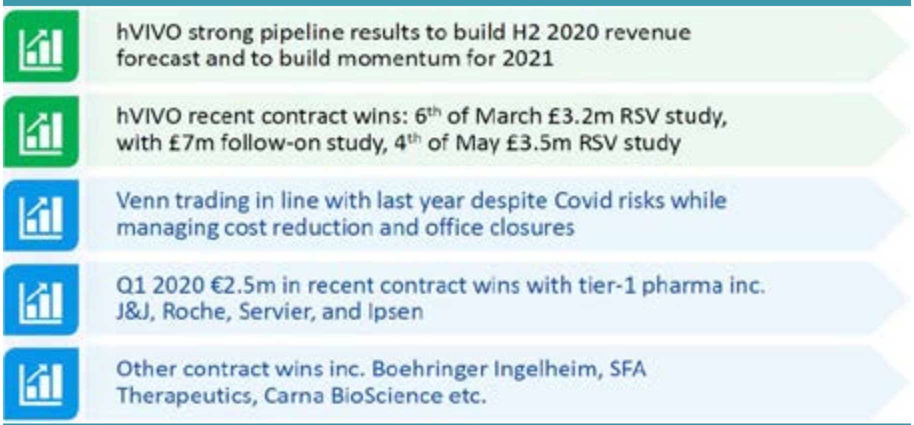


Source: Open Orphan

News flow

The benefits of an enlarged group have been clear from a number of recent contract wins, highlighting the cross-selling activities, as illustrated in the following chart taken from a recent investor presentation. In addition to this, the company has formally launched (4 June) its COVID-19 antibody testing service – hVIVO COVID Clear Test – aimed at large employer groups and channel partners, including GP networks, nursing services, health clinics and private hospitals.

Current trading and contract wins



Source: Open Orphan

Financial summary

- ORPH has just published its results for 2019, but this covers the stub of the old Open Orphan DAC and Venn Life Sciences from the merger on 28 June 2019.
- The annual report provides a summary of the 2019 performance for these groups on a standalone basis, together with a summary of hVIVO's results.
- ***Pro forma:*** The group will look very different going forward. Therefore, a *pro forma*, where possible, of the enlarged entity has been provided so that a comparison with forecasts is more meaningful.
- **Net cash/(debt):** On a *pro forma* basis, the combined entity had net debt of -€0.18m, comprised of gross cash of €3.5m, less loans and leases of -€3.68m. This has been boosted by two capital increases, totalling gross new capital of €19.0m.
- **Forecasts:** Based on our assumptions, the company looks set to make a modest loss in fiscal 2020 and then move into profit and become cash-generative in fiscal 2021, as the enlarged group eliminates duplication of costs and benefits from synergies for customers emerging from the complementary service offering.

Financial summary

Year-end Dec (€m)	ORPH 2019	Venn LS 2019	hVIVO 2019	*Pro forma* 2019	2020E	2021E
Profit & Loss						
Sales	3.84	15.09	8.45	25.66	32.00	45.00
COGS	-	-	-	-21.50	-22.00	-27.00
Operating costs	-9.07			-13.99	-12.70	-11.50
Share-based costs	-0.12			-0.30	-0.30	-0.30
EBITDA	-4.43		-3.79	-10.13	0.00	0.00
Other income (grants etc.)	0.20		1.28	1.47	0.00	0.00
Underlying EBIT	**-5.15**		**-5.89**	**-14.25**	**-3.00**	**6.20**
Exceptional items	-1.07		-0.98	-2.05	0.00	0.00
Statutory EBIT	-6.22		-6.87	-16.30	-3.00	6.20
Net financials	-0.40		-0.10	-0.22	-0.09	0.90
Underlying PBT	**-5.55**		**-5.99**	**-14.47**	**-3.09**	**7.10**
Statutory PBT	0.08				0.00	0.00
Tax liability/credit	0.08				0.00	0.00
Underlying net income	-5.47				-3.09	7.10
Underlying basic EPS (¢)	**-3.31**			**-2.72**	**-0.52**	**1.07**
Statutory basic EPS (¢)	-3.96			-3.10	-0.52	1.07
Balance sheet						
Share capital	0.37			0.53	0.66	0.66
Reserves	2.98			13.50	28.58	35.68
Leases	1.68		0.00	1.68		
Loans & borrowings	2.00		0.00	2.00	2.00	2.00
less: Cash & deposits	1.22		2.28	3.50	18.49	24.50
Invested capital	**5.86**			**14.27**	**14.48**	**15.57**
Cashflow						
Underlying EBIT	-5.15				-3.00	6.20
Change in working capital	1.44				-1.00	-1.48
Company op. cashflow	**-2.88**				**-1.50**	**7.13**
Capital expenditure	-0.03				-0.50	-0.50
Equity issues	5.36				19.00	0.00
Change in net debt	**1.95**				**14.99**	**6.01**
Opening net cash	-4.41				-2.46	14.81
Closing net cash	**-2.46**				**14.81**	**20.82**

Source: Hardman & Co Life Sciences Research

PALACE CAPITAL

A strong hand, attractively priced

Palace Capital's healthy liquidity position takes risks down to a modest level, as does its overweight position to regional offices and the broader asset-class balance. The risk on the Hudson Quarter development site is also low and places Palace Capital among the sector's robust segments. Hudson Quarter, within the York city walls, has been selling well. This provides upside – with risks tightly controlled and manageable – to NAV from developments and medium-term asset management plans. Pre and post COVID-19, the income yield is above the market average, and with below-market risk.

- **Strategy:** Palace Capital REIT invests in and also, in a measured way, develops commercial real estate. While its mandate is not sector-specific, it does exclude central London locations, and ca.48% of assets are offices. It also has exposure to industrial and is well underweight in retail, with no shopping centres.

- **Four pillars:** Palace Capital has four strategic benefits: i) strong sectoral and regional exposure; ii) development opportunities to optimise income and capital values; iii) a strong balance sheet, strengthening further via development sales; and iv) evident medium-term, value-creating opportunities.

- **Valuation:** This is a strongly positioned regional REIT. The regional peer group tends not to undertake development, which we see as an upside for the company, but the market does not price as such. Price to historical NAV for Palace Capital is 31ppts below the (unweighted) average for the regional REIT universe.

- **Risks:** LTV is set for ca.40% at the peak of the apartment and office development project within the York city walls. The latter can be retained or sold, thereby ensuring enhanced income, as well as reduced debt. Current markets are uncertain, and Palace Capital has not commented on calendar 2020.

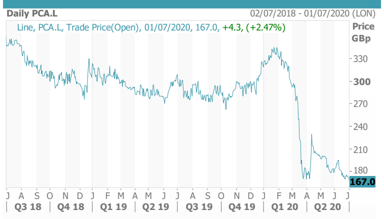
- **Investment summary:** A comparison with the sector is straightforward. The sectoral and regional exposures point to outperformance in capital values, rental change and total returns. While markets all present challenges and reduced clarity, this positioning and the embedded value-adding, specific future events are major positives. In current markets, short-term NAV prospects are volatile.

Financial summary and valuation

Year-end Mar (£m)	2017	2018	2019	2020E
Net income	12.2	14.9	16.4	19.0
Finance cost	-3.0	-3.4	-3.6	-4.0
Declared profit	12.6	13.3	6.4	-12.6
EPRA PBT*	6.4	7.3	8.6	11.0
EPS reported (diluted, p)	36.5	35.8	11.3	-13.1
EPRA EPS (p)	21.2	18.7	16.5	23.2
DPS (p)	18.5	19.0	19.0	14.3
Net cash/debt	-68.6	-82.4	-96.5	-108.6
Dividend yield	10.7%	11.0%	11.0%	8.2%
Price/EPRA NAV	39.1%	41.8%	42.6%	46.2%
EPRA NAV (p)	443.0	414.8	406.6	375.0
LTV	37.3%	29.9%	33.8%	38.7%

Pre share-based payments. Source: Hardman & Co Research

Real Estate



Source: Refinitiv

Market data

EPIC/TKR	**PCA**
Price (p)	**170**
12m High (p)	350
12m Low (p)	170
Shares (m)	45.9
Mkt Cap (£m)	80
EV (£m)	188
Market	Main, LSE

Description

Palace Capital is a real estate investor, diversified by location, but with no London exposure and with minimal exposure to retail. There is an emphasis on city-centre locations. The York development site comprises 6% of assets.

Company information

Chairman	Stanley Davis
CEO	Neil Sinclair
CFO	Stephen Silvester
Executive director	Richard Starr

+44 20 3301 8330
www.palacecapitalplc.com

Key shareholders

Directors	5.0%
AXA	7.7%
Miton	7.4%
J.O. Hambro	7.3%
Stanley Davis (Chairman)	3.6%

Diary

7 Jul	Final results
Aug'20	AGM
Nov'20	Interim results

Analyst

Mike Foster 020 7194 7622
mf@hardmanandco.com

A regional property REIT

Strategy: achieve good rental yields, weighted to robust asset classes; enhance NAV through asset management and development

Strategy and current positioning

Palace Capital invests and develops commercial real estate in the UK regions, with a preponderance in the north of England, and to the south west of London and Milton Keynes. Its mandate excludes central London locations. With higher-than-market income yields and strong reversionary potential, there is a strong base from which to allocate some assets to development and undertake asset-enhancement projects.

Half in offices; 62% in offices and industrial

Strong development under way…

…and more to come at management's choice

Asset positioning better than average market mix

74% of assets are office, industrial or under development. Leisure, at 13.6%, comprises two large assets. 3.8% of assets are in retail warehouse and 8.6% in retail. Much of retail comprises the ground floor part of mixed-use assets. The development site at York Hudson Quarter makes up a significant proportion of the company's development properties, and there are other assets, which either have significant future development potential (the 75,000 sq. ft. central Manchester office) or are smaller sites set to receive redevelopment go-ahead at the appropriate time, e.g. Weybridge High Street redevelopment to residential. The portfolio is laid out here.

Hudson Quarter, within York city walls

£20m cash-on-cash returns realistic to anticipate from acquisition cost; completion likely summer 2021

Developments and potential developments: in control

Developments constitute 13.6% of the portfolio and are well placed. The prestigious mixed-use development at Hudson Quarter, inside the York city walls, comprises 35,000 sq. ft. of offices, 5,000 sq. ft. of commercial space and 127 apartments. Marketing and sales launched in June 2019. As at 30 June, sales contracts had been exchanged on 32 apartments, with a further six under offer. The original cost, several years ago, was £3.8m, as part of a non-core Quintain portfolio. The value of the site, once planning consent was granted, totalled £16m. Gross development value is assessed at £69m, and there is strong potential for a £20m cash-on-cash return to exit. Palace Capital is likely to choose to retain the office element, thus enhancing ongoing income and significantly improving dividend cover, as well as NAV. The site's location means there is no comparable competition. Early office lettings, plus residential sales, indicate as much.

Manchester office: to date, 44% rise in valuation been achieved

2024 could see continuing use as is, or a possible doubling in floorspace

The Manchester office is an interesting case study, highlighting three aspects of the REIT's investment style. The acquisition price, at £150 sq. ft., reflected underinvestment by the previous owner and significant voids. Steady progress has been made on occupancy at this very central site, at rents that have risen steadily, but still offer strong value for the location: at up to £20 sq. ft. It comprises 75,000 sq. ft., and Palace Capital has arranged leases to look to get possession in 2024, with an eye on potentially re-developing. The car park is hardly used, so could either add to tenant attraction – in a "new normal" if car commuting rises – or it could be space for building on, doubling the floorspace. Palace Capital has plenty of options to add to value, and is in control of timings, having already created value.

At Manchester and Weybridge, timing in Palace Capital's hands and prospects encouraging

The Weybridge High Street asset has achieved consent for 28 apartments, with a potential 2021 start, and £13.5m gross development value. As with Manchester, the REIT has "optionality" in its tactics. It can wait, or it can press ahead once markets settle. Neither of these upsides is reflected in valuations.

March quarter income: now 95% covered

COVID-19

While we believe it is important to assess the development potential carefully, and properly balance reward and risk, the weight of assets – as a REIT – is in long-term investments. Currently, 95% of rent due end-March 2020 has been collected, or is being paid on time under freshly agreed deferral schedules. On 1 April, 70% of rents had been collected, which increased by 20 April to 80% collected. These figures make allowance for some rent agreed as monthly payment.

Clearly, June quarter day payment will also be hard work in places

Clearly, current market conditions are uncertain, and Palace Capital has not commented on calendar 2020. An overweight position to offices provides relative resilience. Retail exposure – other than as a mixed component – is limited, and shops are let at low rents, and thus sustainable. Retail parks' tenants are Booker, Pets at Home and Wickes. The 13.6% leisure exposure is more significant, with values currently under pressure as a result of COVID-19, and tenants not being able to operate. The main tenants are Vue and Wetherspoons. The covenant is strong for both, and we consider the interaction positive. Cinemas and restaurants will re-open on 4 July. There are some smaller tenants, and the sector has risk, but these are destination locations.

More detailed projections (consensus) on offices and regional, in particular

Regional offices are by far the largest component

Palace Capital's sectoral and regional exposure, headed up by regional offices, points to potential market outperformance in capital values, rents and total returns. The office property yield differential between London and the regions remains above average and regional supply is diminishing. As just one example on supply reduction, Liverpool alone (the location of one of Palace Capital's top 10 assets) has seen 1m sq. ft. of offices converted to residential (including student) in the past five years.

Office markets in 2019 saw non-London total returns outperform both London West End and London City. A year ago, IPF consensus was for a 2020 total return of 3.1% non-London and 2.7% London – not a great difference, but still one where regional growth outpaces London. The latest IPF data (collected from March to May this year) sees a regional 5.5% fall vs. a 6.5% average London decline. Although these are negative numbers, again the regional outlook outpaces London.

Outperforming in all years – up or down

IPF consensus forward valuations – May 2020 basis

	Rental value growth (%)			Capital value growth (%)			Total returns (%)		
Sector	2020	2021	2022	2020	2021	2022	2020	2021	2022
Office	-5.4	0.3	2.3	-9.5	1.4	4.9	-5.5	5.9	9.3
Industrial	-2.9	1.1	2.4	-7.1	2.9	4.7	-3.0	7.7	9.4
Standard retail	-10.7	-3.4	-1.4	-19.8	-1.8	1.2	-15.5	3.8	6.6
Shopping centre	-12.0	-5.0	-3.0	-24.7	-4.6	-2.7	-19.7	2.2	4.1
Retail warehouse	-9.6	-2.7	-0.5	-20.2	-1.1	1.1	-14.6	6.1	8.3
All property	-6.3	-1.3	0.8	-12.4	0.2	2.9	-8.1	5.3	7.9
London West End office	-5.9	0.7	3.3	-10.2	2.3	8.2	-7.1	5.9	11.8
London City office	-6.6	0.2	3.7	-9.9	2.0	7.5	-5.9	6.3	12.1

Source: IPF: Investment Property Forum

The risk and reward

SWOT analysis

Strengths	Asset management plans bring NAV upside potential, as well as sectoral and geographical strength on income front.
Weaknesses	2020 outlook unclear. Estimates withdrawn (written pre-results).
Opportunities	Upon completion, Hudson Quarter will benefit NAV and net debt and income line. Estimated rental value (ERV) is 30% above passing rents.
Threats	2020 cashflow is under pressure from COVID-19-related issues. Debates about "death of the office" ignore the possibility of moves into lower-cost, well-connected, lower-rise, lower-density city-centre regional assets.

Source: Hardman & Co Research

As to loan covenants, a 20% valuation fall would have to take place before "repairs" to any covenants would be needed. Palace Capital has £20m gross cash available.

Rent collection: successful focus

Investment conclusions

- 2020 is a difficult year for the sector and, although Palace Capital cut its 3Q'20 interim dividend, 91% of rentals due end-March 2020 are either paid or on agreed schedules. As this document goes to press, the results for the year to March 2020 are set to be announced. The scheduled date is 7 July 2020.

Risk:reward balance was, and very much remains, significantly ahead of the sector

- Pre and post COVID-19, the income yield is above the market average, and with below-market risk. This reversionary yield potential will, of course, be reviewed at the imminent results (announced post this note but pre the Hardman & Co *Investor Forum*). The risk is below market because of the macro-sector positioning, but also because care has been taken to secure sites in the right micro-location. The balance is towards city-centre, well-connected sites in cities with above-average graduate employment profiles.

Northern powerhouse

- The positioning is significantly overweight to offices and also industrial. Both sectors are set to outperform the wider market in the next two forecast years, as they did in 2019 (*Investment Property Forum* consensus).
- Not only are sectoral weightings propitious, but the exposure to the regions – particularly the north of England – is a positive, we believe.

Outperformed long term

- Management has created value, with total accounting returns since the 2013 launch outperforming the sector average. In this document, we have touched, in a limited way, on some of the development projects, and all reduce risk and add value, in our view. Hudson Quarter has been selling well, and the location alone means there is no comparable competing site. The share price reflects more on the risk than the reward of development.

In control of events

- On other potential development sites, Palace Capital is in control of the timing, configuration and decisions of how best to adapt to future market conditions.

"Working" the portfolio

- Part of value creation is asset management, which includes the optimisation of rent and, at times, this means deliberately holding back space. This space is readily lettable, providing upside, in due course, to the income stream. Typical is a city-centre Leeds office, with the Bank of England as one of the tenants. Management is taking care to optimise the reversionary potential in the portfolio, identified by the valuers at the last results (to September 2019).

Financial summary and valuation

Year-end Mar (£m)	2015	2016	2017	2018	2019	2020E
Net income (after direct costs)	7.44	12.97	12.21	14.91	16.43	18.95
EPRA operating profit	6.00	10.92	9.30	10.73	12.35	14.95
Property revaluation, transaction cost and disposal profit	9.31	3.10	6.29	6.01	-1.25	-16.70
Profit on disposal, transaction costs	-0.46	-0.52	3.19	0.27	-0.36	0.00
Operating profit (post share-based payments)	15.20	13.91	15.35	16.57	10.77	-7.95
Finance	-1.40	-2.26	-3.01	-3.43	-3.74	-4.00
EPRA PBT (pre-revaluation, etc.)	4.60	8.66	6.45	7.30	8.61	10.95
Financial derivatives: change in fair value	0.00	0.00	0.00	0.00	-0.93	-0.70
PBT, as declared (pre share-based)	13.91	11.76	12.58	13.31	6.43	-6.55
Tax including deferred tax and capital allowances	0.10	-0.95	-0.99	-0.77	-1.26	-0.30
EPRA PAT	4.70	7.71	5.46	6.53	7.35	10.65
EPRA EPS (diluted, pre share based payments, p)	26.87	31.32	21.21	18.67	16.54	23.20
EPS reported (diluted, p)	80.00	43.90	36.50	35.85	11.26	-13.06
DPS (p)	13.00	16.00	18.50	19.00	19.00	14.25
EPRA net assets	80.0	106.8	111.8	190.0	187.1	172.1
Net cash (debt/finance lease)	-24.7	-65.4	-68.6	-82.4	-96.5	-108.8
EPRA NAV/share (p)	395.6	414.3	443.0	414.8	406.6	375.0
LTV	24.0%	37.5%	37.3%	29.9%	33.8%	38.7%

Source: Hardman & Co Research

2 July

PHOENIX COPPER LTD

Potentially world-class copper-gold-silver mine

PXC has consolidated the former Empire mine (which recovered a phenomenal 3.64% copper before WWII suspension), and five other former mines and deposits into a potentially world-class copper/precious metals project located in one of the most favourable mining regions, Idaho, US. The planned initial silver mine will provide cashflows to develop the extensive copper-gold-zinc mineralisation in the rest of the ore body. Our estimated DCF valuation (based on silver mine only) is 31p/share. Substantial development work has been done on a first-stage (shallow oxide ore) copper mine, for which we estimate a £17.3m NPV if greenlighted today.

- **Strategy:** PXC focuses on near-term cashflow and will maximise returns/minimise risk to shareholders by developing the Empire system in stages. The project's polymetallic nature has enabled PXC to change the phasing of mine development, substituting a silver mine for the previously planned open pit copper mine.

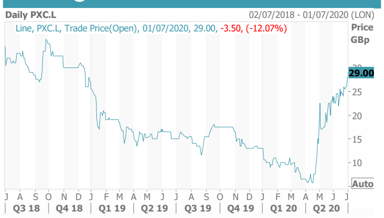
- **Silver mine:** Careful mine planning has reduced the capital cost to $31.8m, versus the $51m cost for the first copper mine. The new plan sees 23.0m oz silver equivalent (Ag Eq.) during 2022-31, with cash production costs of $7.60/oz Ag Eq. Permitting is under way, and commissioning is expected in 2022.

- **Major upside potential:** Only ca.1% of Empire's potential ore system has so far been explored. Geologically, the deposit shows similarities with Antamina in Peru, the world's largest skarn-hosted copper mine. Further work will confirm whether there are additional copper-tungsten-molybdenum porphyry resources at depth.

- **Risks:** PXC is subject to the normal risks for a junior miner, including volatility in silver prices, identifying additional ore resources, operational risks in executing the mining plan, running processing facilities, and funding risks. However, we believe that jurisdictional risk is significantly reduced in PXC's case.

- **Investment summary:** Our DCF valuation is 31p/share, based solely on the silver mine, a cautious (for now) 15% discount rate and a long-term silver price of $19.00/oz. PXC's share price is highly geared to the upside thesis for silver (and copper), with each $1.00/oz adding an estimated 6.2p-6.3p/share.

Mining



Source: Refinitiv

Market data

EPIC/TKR	**PXC**
Price (p)	**29.96**
12m High (p)	30.00
12m Low (p)	5.00
Shares (m)	62.46
Mkt Cap (£m)	18.71
EV (£m)	19.30
Free Float*	84.30%
Market	AIM

**As defined by AIM Rule 26*

Description

Phoenix Copper (PXC) is developing the former Empire deposit, and the surrounding area in central Idaho, into a potentially world-class copper and polymetallic mine. First production is expected in 2022.

Company information

Chairman	M. Edwards-Jones
CEO	Ryan McDermott
CFO	Richard Wilkins
CTO	Roger Turner
Director	Dennis Thomas

+44 7590 216 657
www.phoenixcopperlimited.com

Key shareholders

Martin Hughes (Cheviot)	21.59%
Directors	8.70%
Hargreaves Lansdowne.	6.54%
Pershing Nominees	6.29%

Diary

Jul-Aug'20	Assay results
3Q'20	Updated resources

Financial summary and valuation

Year end Dec ($m)	2017	2018	2019	2020E	2021E	2022E
Sales	0	0	0	0	0	48.800
Underlying EBIT	-1.058	-1.654	-1.105	-1.282	-1.313	0.787
Reported EBIT	-1.058	-1.654	-1.105	-1.282	-1.313	0.787
Underlying PTP	-1,056	-1.652	-1.128	-1.380	-5.069	-2,708
Statutory PTP	-1,056	-1.652	-1.128	-1.380	-5.069	-2,708
Underlying EPS (p)	-8.20	-5.82	-2.76	-2.44	-3.30	7.15
Statutory EPS (p)	-8.20	-5.82	-2.76	-2.44	-3.30	7.15
Net (debt)/cash	1.904	0.113	-0.589	-0.953	-26.530	-8.895
Shares issued	16.498	28.121	40.862	56.436	82.086	82.086
P/E (x)	n/a	n/a	n/a	n/a	n/a	5.2
Dividend yield	n/a	n/a	n/a	n/a	n/a	n/a
FCF yield	n/a	n/a	n/a	n/a	n/a	64.6%

Source: Hardman & Co Research

Analyst

Paul Mylchreest 020 7194 7622
pm@hardmanandco.com

Overview – the Empire "system"

PXC floated on AIM in 2017 with clear strategy

PXC was floated on London's AIM market in June 2017, with a clear goal to execute the phased development of the former Empire copper mine and nearby ore bodies in central Idaho. PXC's management team had screened numerous opportunities before identifying Empire as having the lowest manageable risks, combined with the greatest upside – specifically the potential for a world-class copper and precious metals project.

Historical copper grades were phenomenal

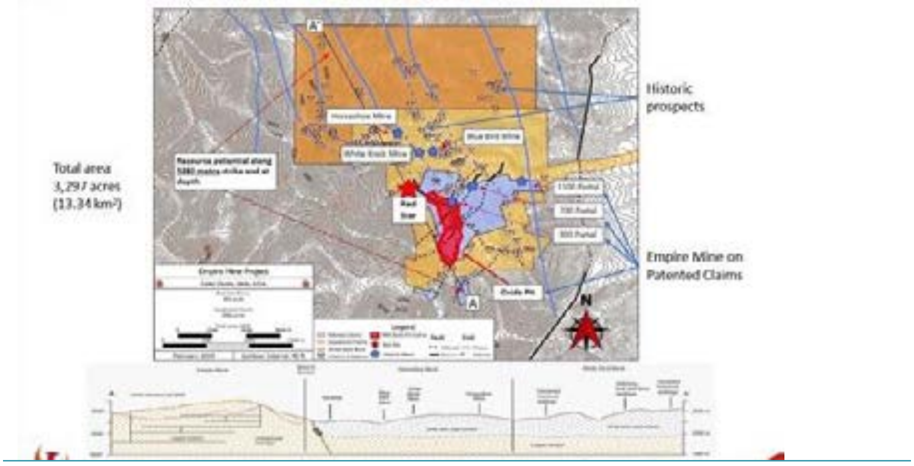
Grasping PXC's potential requires an understanding of the historical context of the Empire mine. Before its closure due to WWII, mining at Empire focused on high-grade sulphide mineralisation. During 1901-42, 694,000 tons of ore were extracted, with the copper recovery at 3.64%. By purchasing adjacent claims, the company has enlarged the original 818-acre Empire property into 5,717 acres. PXC's portfolio now includes:

- three other former mines – Horseshoe, Bluebird and the White Knob Mining Group (White Knob), which produced copper, gold, silver, lead, zinc and tungsten;
- the Red Star sulphide deposit – the site of the proposed silver mine – which is located north west of the Empire copper oxide deposit; and
- the Carlin-type (sediment-hosted hydrothermal) Navarre gold zone.

Mineralisation currently extends for 5.4km

Mineralisation at Empire extends along a 5.4km strike that trends north west from the Empire open pit (oxide deposit) via Red Star to the Horseshoe mine.

Phoenix Copper – Empire and nearby mines and deposits



Source: PXC

Empire part of mineralised "system"

It is becoming increasingly likely that Empire, and the surrounding mines and deposits, are part of a much larger mineralised "system". The mineralisation identified and exploited so far is hosted in garnet-pyroxene endoskarn.

The key issues for PXC's ongoing exploration programme going forward are:

- the scope of the endoskarn-hosted mineralisation, which is above, below and adjacent to the historical Empire mine workings; and
- whether there is also a large and accessible copper-tungsten-molybdenum porphyry ore body at depth.

Most of world's largest copper mines based on porphyry mineralisation

Finding porphyry mineralisation could be highly significant, as most of the world's largest copper mines are located on porphyry deposits. They are also the dominant source of molybdenum and a major source of gold production. Furthermore, it is estimated that less than 1% of the Empire system has been "exploited and explored" so far, and the entire 5.4km of current strike length is open at depth.

Silver lining to short-term strategy change

Initial plan was for open pit copper mine

In autumn 2019, PXC was working on a Feasibility Study for an open pit copper mine, based on near-surface oxide ore. This was to be a low-cost "starter mine", which would:

- provide returns to PXC's shareholders; and
- generate cashflows to develop the much larger and higher-grade sulphide endoskarn and (potentially) porphyry ore bodies beneath the oxide ore.

The intensification of US-Chinese trade tensions in the second half of 2019 and the sharp decline in the copper price towards $2.50/lb necessitated an alteration in PXC''s near-term strategy, while the longer-term goal remains unchanged.

Polymetallic nature of ore body was key to flexibility…new strategy focuses on Red Star silver mine

The change in strategy was facilitated by the polymetallic nature of the ore body at Empire and the zoned character of the mineralisation. Instead of starting with the copper from the oxide open pit, the new strategy focuses on mining silver-lead mineralisation in the Red Star discovery, with two advantages:

- The outlook for the silver price is looking considerably more upbeat. Silver is a monetary metal, as well as an industrial metal, and the Federal Reserve has joined other central banks in reverting to easier/unconventional monetary policies.
- The capital cost of the initial silver-lead underground mine with a flotation process plant is below $30m, much lower than the $51m cost for the copper mine.

Our new model for Phoenix Copper is based on the development of the Red Star deposit. The publication of a maiden inferred resource estimate for Red Star in May 2019 was based on the results of three drill holes. Nevertheless, it amounted to 103,500 tonnes of ore and more than 0.5m oz of contained silver.

Empire – mineral resources and reserves (May 2019)

Inferred (t)	Ag (oz)	Au (oz)	Cu (oz)	Pb (t)	Zn (t)	Ag (g/t)	Au (g/t)	Cu (%)	Pb (%)	Zn (%)
103,500	577,000	2.800	338	3,988	957	173.4	0.85	0.33	3.85	0.92

Source: Phoenix Copper

Current plan is to extract 1.6m tonnes of ore over 10 years

Further exploration work at Red Star has shown that the primary vein, extending south west to north east, is now measured at 320m and is open at both ends. The mineable width is estimated at 5m-7m. Channel sampling has reinforced PXC's optimism that the 103,500-tonne resource can be enlarged to well over 1.0m tonnes. Indeed, the current Red Star mine plan incorporates 1.6m tonnes of ore over a 10-year life of mine (LOM), over two phases, as follows.

Red Star mine – two phases of ore production (tonnes)

Phase 1 - 2022-26	639,000
Phase 2 – 2026-31	958,500
Total ore production	**1,597,500**

Source: PXC

This year will see 20 drill holes and 1,500m along primary venin

The 2020 drilling programme at Red Star began on 28 April 2020, and involves an additional 20 holes and 1,500m of drilling along the primary vein. The twofold aim is:

- to enlarge the current 103,500-tonne resource to at least 650,000 tonnes at silver and lead grades that are equal or better than the existing resource; and
- to categorise as much of the new resource as possible in the "Measured" category.

PEA likely to follow 2020 drilling programme…

If the 2020 exploration is successful in enlarging the Red Star resource, we expect that PXC will undertake a Preliminary Economic Assessment (PEA), possibly followed by a Feasibility Study, although the latter might be skipped, as the underground mine will be straightforward. PXC is budgeting $0.75m/p.a. of exploration expenditure in 2022-25 to develop a further 950,000-1.0m tonnes of ore for phase 2 production.

…with development decision by year-end

A development decision for the Red Star mine is expected by the end of 2020. Going forward, the deeper sulphide, and potential porphyry ore body and targets, will be the main focus of the ongoing exploration programme. This will allow PXC to evaluate multiple stages of mine development in the coming years.

Key assumptions and valuation

Our current assumptions for Red Star's development include the construction of an underground silver mine with a flotation process plant, mine production of 450 tonnes of ore per day, and nearly 1.6m tonnes over a 10-year mine life. Annual production, in terms of silver equivalent ounces, is forecast at slightly over 2.4m oz.

Red Star mine – key PXC assumptions

Initial mine life	10.0 years
LOM ore production (tonnes)	1,597.500
Silver average head grade (oz/tonne Ag Eq.)	16.0
Silver recovery	90.0%
Recovered silver equiv. p.a. (m oz)	2.410
LOM average silver price ($/oz)	19.00
Royalty	5.0%
LOM average cash op. cost ($/oz.)	7.60
Initial capital cost incl. working cap ($m)	29.240
LOM sustaining capital ($m)	16.0
Discount rate	15.0%

Source: PXC

We assume mine is financed 80:20 on debt:equity basis

After raising ca.$2.54m in equity finance in 2019, we expect PXC to raise a further $3.0m in 2020 and $6.5m in 2021. In terms of financing mine construction/working capital and corporate expenses in 2021, we are assuming that the ca.$32.5m aggregate cost is financed on an 80:20 debt:equity basis.

We estimate free cashflow generation will be $13m-$18m p.a.

When Red Star is commissioned, PXC should generate substantial free cashflow, i.e. ca.$13m-$18m p.a. during 2022-32. We estimate that PXC will be able to repay the $27.3m of debt by the end of 2024, i.e. after three years.

Our 31p/share valuation currently based on $19.00/oz silver price and 15% discount rate

We have valued PXC using a DCF model based on the silver mine only. It incorporates a cautious discount rate of 15% (which we will reduce on exploration success), mine production to 2031 and a long-term silver price of $19.00/oz. On these assumptions, our fair value for the company is 31p/share, versus the current price of 29.96p.

Our valuation currently excludes the open pit copper mine, where development work is ongoing. We have previously estimated a £17.3m NPV, versus a current PXC market cap. of £18.7m, using copper and zinc prices of $3.00/lb and $1.20/lb, respectively. Recent small-scale testing of samples from the open pit using non-toxic ammonium thiosulphate reagent (instead of cyanide) resulted in high gold recoveries of 98% and silver of 70%-78%. If larger-scale testing is also successful, the mine's economics could be transformed – precious metals revenue streams could be incorporated into the mine plan from the beginning, without the need for lengthy permitting. The gross value of Measured & Indicated gold and silver resources in the open pit at a price of $1,600/oz and $19.00/oz for gold and silver, respectively, is £385.2m ($477.7m).

Disclaimer

Hardman Research Ltd, trading as Hardman & Co, is an appointed representative of Capital Markets Strategy Ltd which is authorised and regulated by the Financial Conduct Authority under Hardman & Co provides professional independent research services. Whilst every reasonable effort has been made to ensure that the information in the research is correct, this cannot be guaranteed.

The research reflects the objective views of the analysts named on the front page. However, the companies or funds covered in this research may pay us a fee, commission or other remuneration in order for this research to be made available. A full list of companies or funds that have paid us for coverage within the past 12 months can be viewed at http://www.hardmanandco.com/

Hardman & Co has a personal dealing policy which debars staff and consultants from dealing in shares, bonds or other related instruments of companies which pay Hardman for any services, including research. They may be allowed to hold such securities if they were owned prior to joining Hardman or if they were held before the company appointed Hardman. In such cases sales will only be allowed in limited circumstances, generally in the two weeks following publication of figures.

Hardman & Co does not buy or sell shares, either for its own account or for other parties and neither does it undertake investment business. We may provide investment banking services to corporate clients.

Hardman & Co does not make recommendations. Accordingly we do not publish records of our past recommendations. Where a Fair Value price is given in a research note this is the theoretical result of a study of a range of possible outcomes, and not a forecast of a likely share price. Hardman & Co may publish further notes on these securities/companies but has no scheduled commitment and may cease to follow these securities/companies without notice.

Nothing in this report should be construed as an offer, or the solicitation of an offer, to buy or sell securities by us.

This information is not tailored to your individual situation and the investment(s) covered may not be suitable for you. You should not make any investment decision without consulting a fully qualified financial adviser.

Hardman Research Ltd, trading as Hardman & Co, is an appointed representative of Capital Markets Strategy Ltd and is authorised and regulated by the Financial Conduct Authority (FCA) under registration number 600843. Hardman Research Ltd is registered at Companies House with number 8256259. However, the information in this research report is not FCA regulated because it does not constitute investment advice (as defined in the Financial Services and Markets Act 2000) and is provided for general information only.

Follow us on Twitter @HardmanandCo

Hardman & Co Research Limited (trading as Hardman & Co)