



COMMONWEALTH OF PENNSYLVANIA
PUBLIC SCHOOL EMPLOYEES' RETIREMENT SYSTEM

Public Investment Memorandum

HgCapital 8, L.P.

Private Equity Commitment

Darren C. Foreman
Senior Portfolio Manager

November 4, 2016



Recommendation:

Staff, together with Portfolio Advisors, recommends to the Board a commitment of up to £95 million to HgCapital 8, L.P. (the "Fund"). Hg (or the "Firm"), a London UK based, private investment firm, is sponsoring the Fund to make investments in control Northern European middle-market buyouts with enterprise values of up to £500 million.

Firm Overview:

Since the firm's independence on December 2000, Hg has made 42 portfolio investments in control Northern Europe middle market buyouts worth a total enterprise value of approximately £7 billion.

The following table lists all private equity funds raised and/or managed by Hg.

Fund	Vintage	Fund Size
MUST 4	2001	£742 million
HgCapital 5	2006	£958 million
HgCapital 6	2009	£1.9 billion
HgCapital 7	2013	£2.0 billion

Market Opportunity:

Over the last decade, HgCapital's target market has remained consistently active with approximately 200 deals executed in their space on average the past 5 years. HgCapital has a broad pipeline of potential transactions to selectively make investments in HgCapital 8. As of June 30, 2016, HgCapital is currently tracking approximately 500 opportunities of which 240 of these should be investment opportunities over the next 18 months.

Portfolio Fit:

A commitment to HgCapital 8 will give PSERS' Private Markets portfolio exposure to middle market growth buyout market in Northern Europe. Hg will focus on fast growing companies in the UK, Germany, Benelux (Belgium, Netherlands and Luxembourg) and the Nordic Region, which would be complementary to PSERS' Private Markets portfolio. Hg's focus on superior businesses in growth segments with high levels of recurring revenue, mission critical products or services and their ability to create value should allow the Fund to be a top performer.

Investment Strategy:

The Fund will seek to invest in companies with enterprise values typically between £100 million and £500 million in technology, media and telecom (TMT), services and the industrials sector. Hg seeks control positions where the investment team can facilitate active portfolio management. The Fund will invest in the Northern Europe with the following expected ranges by country:

Country / Region	Expected (%)
UK	40% - 60%
Germany	20% - 30%
Scandinavia	10% - 15%
Benelux	5% - 10%
Other	5% - 15%

Target businesses have the following characteristics:

- Business to business, not business to consumer businesses
- Critical product or service



- High level of recurring revenues
- Fragmented customer base
- Low economic sensitivity
- High customer net promoter score (“NPS”)

Investment Team:

Hg has 15 Partners, 56 investment professionals and a total staff of 112 (100 in London and 12 in Munich). This provides depth to perform due diligence, manage existing portfolio companies and the realization of its investments. There are (on average) two investment executives per portfolio company. The table below highlights the experience of Hg’s Investment Committee:

Name	Title	Yrs. PE Experience Hg / Total	Prior Experience
Tom Attwood	Chairman	5 / 30	Intermediate Capital Group, HSBC
Nic Humphries	Senior Partner	15 / 26	Geocapital Partners, Barclays Private Equity
Martin Block	Partner	19 / 19	HSBC, County Natwest Merchant Bank
Sebastien Briens	Partner	5 / 11	Bain & Company, France Telecom
Matthew Brockman	Partner	6 / 16	Apax
Kai Romberg	Partner	12 / 12	Boston Consulting Group
Richard Donner	Partner	9 / 9	Baird
Matthew Rourke	Managing Partner	7 / 21	Deloitte
Frances Jacob	Partner	28 / 33	3i

Investment Highlights:

Attractive Investment Strategy
HgCapital has generated over 90% of equity value creation through revenue and EBITDA growth. The primary driver of this has been organic revenue growth, with material contributions from both acquisitions as well as the enhancement of margins (operating leverage and cost efficiencies).
Consistent Investment Performance
<ul style="list-style-type: none"> • A 2.5x gross MoC (multiple of cost) and a 37% gross IRR on 24 realized or substantially realized investments in the Firm’s core sectors • A 2.2x gross MoC and a 35% gross IRR on 105 realized or substantially realized investments
Improvements by Nic Humphries
In late 2007, Nic Humphries took over the role of Senior Partner in a planned succession. The Firm tightened its investment approach in 2010 to focus on companies with business to business (B2B) business models in the TMT, services and industrial sectors. Further, Matthew Brockman was made Chair of the Investment Committee (IC). Mr. Brockman’s leadership on the IC has helped improve the quality of the deals that Hg invests in.

Investment / Risk Considerations:

Transition to more focus on TMT, Services and Industrials
Hg decided in 2013 not to invest in health care companies due to their cyclical nature and poor historical performance. Hg should produce better returns going forward by concentrating on what they do best, investing in TMT, Services and Industrial companies.
Currency risk
Hg 8 is a Great Britain Pound (GBP) fund. The Pound has declined recently to the 1.2 range (GBP/USD). PSERS strategically hedges currencies to mitigate this risk.

PSERS History & Performance:

PSERS has committed to one HgCapital Fund (Hg 7), this would be the second commitment to an HgCapital Fund. The table below summarizes Hg’s investment performance as of June 30, 2016:



(£ in millions)	Portfolio	Vintage	# of investments	Fund Size	Realized	NAV	Net IRR	MOIC
MUST 4	PE	2001	21	£742M	£1.5B	-	23%	2.0x
HgCapital 5	PE	2006	12	£958M	£1.4B	£147M	12%	1.8x
HgCapital 6	PE	2009	19	£1.9B	£1.5B	£1.6B	10%	1.5x
HgCapital 7	PE	2013	10	£2.0B	£104M	£1.8B	24%	1.3x

Finance Committee Disclosure:

Relationship with Portfolio Advisors:	Portfolio Advisors committed £14M in Hg6, £20M in Hg7 and is expected to invest in Hg8
Placement Agent:	Rede Partners was hired as a consultant and not to raise money from any specific LP. Rede was not used to solicit business from PSERS. Their fee is paid by Hg
PA Political Contributions:	None
Conflicts:	None reported
History with PSERS:	PSERS invested in HgCapital 7
PSERS Internal (AIC) Approval:	November 4, 2016

Oversight Responsibility:

Investment Office:	Charles J. Spiller Darren C. Foreman	Deputy CIO, Non-Traditional Investments Senior Portfolio Manager
External Consultant:	Portfolio Advisors LLC	



October 20, 2016

Board of Trustees
Commonwealth of Pennsylvania
Public School Employees' Retirement System
5 North 5th Street
Harrisburg, PA 17101

Re: HgCapital 8, L.P.

Dear Trustees:

HgCapital LLP (“HgCapital” or “The Firm”) is seeking to raise HgCapital 8, L.P. (“Hg8”, “Fund 8” or “the Fund”). Hg8 will continue to make sector-focused control investments in middle-market companies in Northern Europe. Hg expects to invest the majority of the Fund’s capital through its three sector teams: Telecom, Media and Technology (“TMT”), Industrials, and Services. Fund 8 is targeting investments with enterprise values between £100 million and £500 million with a typical equity investment between £100 million and £250 million, implying a portfolio of about 12-15 companies. Fund 8 is targeting commitments of £2 billion. The General Partner is expected to contribute at least 2% of the Limited Partner Commitments. The Firm anticipates a first and potentially final close before year end.

Hg’s investment strategy contains two key dimensions. First, the Firm systematically targets companies with robust, resilient and protected business models that it believes represent strong platforms for sustainable and defensive growth across market cycles. Secondly, it seeks to leverage its deep domain expertise to identify attractive sub-sectors that exhibit these attributes. The intersection of these two dimensions characterizes Hg’s “sweet-spot” investment strategy. Main business model investment criteria include:

- ◆ B2B businesses
- ◆ Business or mission-critical product or service
- ◆ High level of recurring / repeat revenues
- ◆ Fragmented customer base
- ◆ Intellectual property protection (technology, brand or business model)
- ◆ Low volatility / low economic cycle sensitivity
- ◆ Low churn rates / high customer net promoter score (“NPS”)

Given the similarities of business models and sub-sectors in the Hg portfolio, the Firm focuses on three central pillars to drive value:

- ◆ Building and growing sustainable books of business leading to profitable expansion in the company’s customer base;
- ◆ Investing heavily in management and business infrastructure to build strong platforms for future growth; and



- ◆ Smart positioning, through on-going strategic development of the business with a potential exit in mind.

To achieve its growth objectives, the Firm focuses its efforts on four key initiatives: sales, marketing and pricing strategy; customer success; HR & Employee engagement; and M&A support. These initiatives help to drive business expansion across the Firm's portfolio.

Portfolio Advisors' recommendation is based upon the following analytical factors and is made within the context of Commonwealth of Pennsylvania Public School Employees' Retirement System's ("PSERS") investment guidelines.

- Detailed due diligence, including interviews with industry peers and private equity professionals. The on-site due diligence visit was performed on September 21, 2016.
- Evaluation of the composition of the investment team, how they work together, compensation structure and other factors that help determine whether a group is likely to be able to replicate past successes as currently configured.
- Evaluation of the Fund's proposed investment strategy within the context of the current investment environment.
- The strategy proposed for the Fund is appropriate for the Private Equity Partnership component of the portfolio.

The individuals at Portfolio Advisors who were primarily involved in the due diligence process for the Fund are:

Nicolas von der Schulenburg – Managing Director, Zurich Office
Nadine Zangger – Vice President, Zurich Office

Based on the above, Portfolio Advisors recommends that PSERS commit to up to £95 million in HgCapital 8, L.P. Portfolio Advisors makes this recommendation considering the General Partner's qualifications and PSERS' overall investment guidelines.

This recommendation is given solely for the benefit of PSERS and cannot be relied upon by other investors considering an investment in the Fund, since their needs, objectives and circumstances may not be identical to those of PSERS. The scope of this recommendation is limited to the investment merits of the Fund. Portfolio Advisors does not provide legal or other non-investment-related advice.

Sincerely,

WILLIAM J. INDELICATO

MANAGING DIRECTOR