

COMMONWEALTH OF PENNSYLVANIA
PUBLIC SCHOOL EMPLOYEES' RETIREMENT SYSTEM

Public Investment Memorandum

Cederberg Greater China Equity Fund
Global Public Equity

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November 15, 2018



Recommendation:

PSERS Investment Professionals, together with Aksia, LLC recommend that PSERS invest up to \$200 million in the Cederberg Greater China Equity Fund (Cederberg) and/or related investment vehicles (severally and collectively, "Fund"). This recommendation is based on our assessment of the investment strategy, the firm and team's demonstrated ability to execute and the strategic fit within the overall global equity program.

Firm and Vehicle Overview:

Cederberg Capital UK¹ was founded in 2011 by Dawid Krige with a passive investment and operational support provided by Peter Bowie, Louis Norval (via Homestead Holdings/Pinelake International) and Clearance Capital Limited. The firm was established to exploit the dynamic growth opportunities and frequent security mispricings observed in the Chinese equity markets. Prior to founding Cederberg, Mr. Krige spent nine years as an Asia equity portfolio manager including positions at Mondrian Securities and FirstRand.

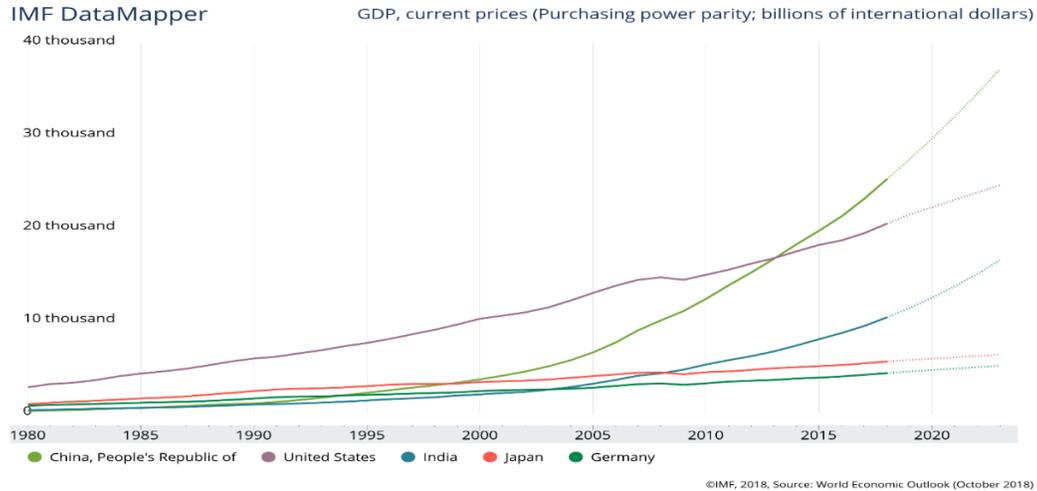
Cederberg manages a total of \$721 million \$324 million of which is in the flagship Cederberg Greater China Equity Fund. The Fund operates as a Cayman master with both onshore and offshore feeders. Additionally, Cederberg sub advises the \$105 million Banor Greater China Fund, a UCITS (undertaking for the collective investment of transferable securities. European funds akin to U.S. mutual funds) vehicle and a separate account both of which follow a similar Greater China mandate. Internal capital (including founding partners) represents approximately 37% of the asset in the Cederberg Greater China Equity Fund. Investment staff have always retained a majority interest in the firm. In the second half of 2017, Cederberg repurchased Clearance's position and by the close of 2020 the firm is expected to repurchase Peter Bowie's interest bringing employee ownership to 80%.

Cederberg is headquartered in London with a research office in Shanghai. The firm employs a total of eight people including a four-person investment staff, a Chief Operating Officer and a dedicated compliance officer. The firm is registered with the UK Financial Conduct Authority.

Market Opportunity:

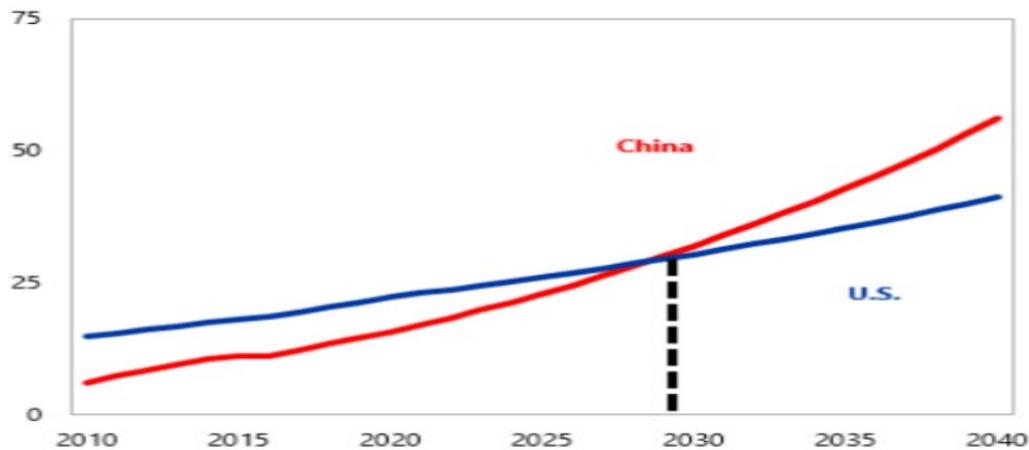
China is a pivotal element in any global equity portfolio. With the world's largest population and second largest nominal GDP (25% larger than the United States on a purchasing power parity basis), China influences the global economy as much as any nation. It is the largest exporter and second largest importer on Earth. Its prodigious national debt is issued largely in its own currency and financed through one of the world's highest savings rates. The nation holds over \$4 trillion of foreign currency reserves to support the trading level of its currency. Perhaps most importantly, because Chinese fiscal and monetary policies are independent of the U.S. Federal reserve, the Bank of Japan and the European Central Bank, Chinese markets can represent a deep pool of diversifying assets.

¹ Cederberg Capital UK was the predecessor structure to the current investment advisor Cederberg Capital Limited.



China's GDP could overtake the United States by 2030.

(nominal GDP in USD trillions, assuming market exchange rate of 2017)



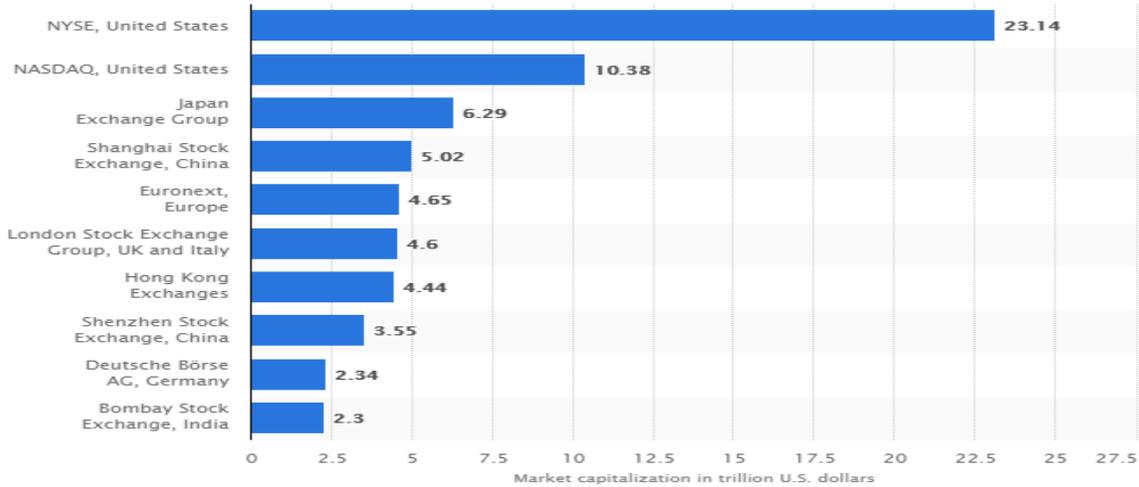
Historically and continuing to this day, most investors outside of Chinese, especially institutional investors, lack adequate exposure to Chinese equities. (Note: Chinese equities include so called “A shares” (Chinese companies listed onshore in Shanghai or Shenzhen), “H shares” (Hong Kong listings of mainland Chinese companies), Taiwanese listings, and US or Singapore listings of Chinese companies.) The Shanghai, Shenzhen and Hong Kong stock exchanges represent a combined \$12.9 trillion of market capitalization, roughly double that of the Japan Exchange Group and larger than the NASDAQ. This lack of exposure to such sizable equity markets is attributable to previous regulatory and other hurdles to accessing these markets. These hurdles were key reasons why the primary index providers such as MSCI and FTSE did not include Chinese equity markets at anywhere near their market capitalization weights. These hurdles have been coming down, and with that, the index providers have been gradually adding weight in their indices to Chinese equities. China would become 42% of the MSCI Emerging Markets index² and 5.42% of the MSCI ACWI IMI benchmark, outranking the UK, France and Canada if the 3,000+ companies in the Shanghai and Shenzhen exchanges were fully included in the MSCI calculations.³ A recent analysis by

² MSCI “The World Comes to China”

³ Calculations based in Market Capitalization figures provided by Bloomberg and assumed 42% weight in MSCI EM index



Bridgewater Associates projects that China could become 18% of MSCI ACWI IMI by 2023 assuming full A-Share inclusion. The Chinese authorities have been working with MSCI to expand the inclusion of A shares in the benchmark. Programs such as the Hong Kong Stock Connect have expanded international access to the Shanghai and Shenzhen Exchanges. As progress continues, China has the potential to experience accumulation from passive funds that track the MSCI benchmarks.



Source: Statista as of April 2018

While China’s sheer size is sufficient to warrant a dedicated allocation within an investor’s portfolio, the growth potential underscores the importance. China’s GDP has grown at an average annual rate of 10% per annum since 1989.⁴ Despite a projected slowdown, the IMF continues to forecast 6.2% growth for 2019 and growth north of 5.5% for the following 4 years. Just as the country transitioned from an agrarian economy to a manufacturing behemoth, the Chinese economy is shifting to value-added industries like technology, healthcare and software. China represented 43% of the filings for global patent applications in 2016⁵ and it boasted 4.7 million university graduates in STEM (science, technology, engineering and math) fields versus 568,000 in the U.S. Information Technology juggernauts like Alibaba and Tencent have present day market capitalizations of \$367 billion and \$315 billion respectively, rivaling Berkshire Hathaway or J.P. Morgan Chase in scale.

Companyname	Location	Industry	Rank +/-	Rank
Apple	United States	Technology	32	1
Alphabet	United States	Technology	20	2
Microsoft	United States	Technology	3	3
Amazon.com	United States	Consumer Services	-	4
Ten cent	China	Technology	7	5
Berkshire Hathaway	United States	Financials	6	6
Alibaba	China	Consumer Services	-	7
Facebook	United States	Technology	-	8
JPMorgan Chase	United States	Financials	19	9
Johnson & Johnson	United States	Health Care	-2	10

Source: PWC “Global Top 100 Companies by Market Capitalisation” 31 March 2018

⁴ TradingEconomics.com / National Bureau of Statistics of China “China GDP Annual Growth Rate”

⁵ World Intellectual Property Organization “WIPO IP Facts and Figures 2017”



While the opportunity presented by general Chinese equity exposure (i.e., beta) is compelling, the market is imbued with opportunities for active managers to add value from stock selection (i.e. alpha). China's rapid growth and historical exclusion from indexes has left many companies under followed. For example, Cederberg estimates that small capitalization companies in China have fewer than one analyst per company following them versus 2-3 for U.S. small cap companies. Chinese retail investors continue to represent 86% of the turnover on the Mainland China A Share marketplace.⁶ In many instances these purchasers will trade rapidly with little regard for underlying fundamentals or valuation. State owned enterprises that comprise large swaths of the market have historically been operated with non-economic motivations. Opaque reporting by companies with complex corporate structures and differing accounting standards elevates the importance of management interviews and independent channel checks by skeptical fundamental analysts.

Investment Strategy:

Cederberg believes that superior risk-adjusted returns can be delivered by establishing long term positions in high quality, growing Chinese companies. The manager also believes that China's structural inefficiencies, rapid growth and a paucity of institutional capital create regular opportunities to build these positions at substantial discounts to intrinsic value. Cederberg seeks to exploit these opportunities through traditional fundamental analysis that begins with a meticulous review of all historical financial documentation released by the company but then quickly shifts to gumshoe research. In addition to conducting hundreds of meetings with corporate management teams each year, the Mandarin-speaking research team regularly travels throughout the country to conduct independent channel checks to support or contradict a stock thesis. Cederberg limits its universe to quality companies which it defines as those with highly visible long-term profitability demonstrating the following characteristics:

- **Durable Moats:** These barriers to entry protect the company from margin erosion by new competitive entrants. Examples include:
 - *Brands/intangibles*
 - *Network effects*
 - *Scale economies*

Cederberg spends considerable time testing the durability of such moats, the difficulty of replicating them and the risk of disruption. Conversely, research also focuses on the threat of regulatory intervention that can weaken these protective barriers.

- **Excellent Management:** In addition to reviewing the management team's historical track record of capital allocation, Cederberg looks to the ownership structure of a company for alignment of interests. Owner/operator models are preferred while teams with meaningful incentives to focus on outside interests are avoided. Complex ownership arrangements are thoroughly investigated.
- **Substantial Margin of Safety:** Cederberg looks to purchase shares when they are trading at discounts and offering 100% or more potential upside over a 3-4 year holding period.

Portfolio Construction:

Cederberg's portfolio construction is designed to ensure that returns are driven by stock selection rather than market beta. Although the manager is aware of broad market movements, tracking error relative to a Chinese benchmark index is not a primary consideration. Key elements of this strategy include:

- **Broad China Focus:** Cederberg is focused exclusively on companies with primary operations in Greater China (this definition includes Taiwan). The manager is agnostic to the listing domicile and the portfolio may include: A shares (Chinese companies listed onshore in Shanghai or Shenzhen), H shares (Hong Kong listings of mainland Chinese companies), Taiwanese listings, and US or Singapore listings of Chinese companies.

⁶ Forbes.com "Five Reasons Why Global Investors Should Be Investing In China A-Shares" / CEIC, UBS



- **Concentration:** Cederberg manages a concentrated portfolio of 15-20 high-conviction ideas.
- **All Capitalization Strategy:** Cederberg's minimum market capitalization threshold for inclusion is \$100 million. Aside from this constraint, the manager is opportunistic in building the portfolio. Historically mid and small capitalization names have comprised about 30% of the portfolio and this is expected to continue.
- **Flexible Approach to Sector Exposure:** Although there are no specific sectors targeted, Cederberg's selection criteria have historically fallen in favor of companies in beverages, education and internet/software.
- **Unleveraged Long Equity Exposure:** While the manager has the legal ability to utilize financial leverage up to 20%, Cederberg has never used leverage and does not anticipate doing so in the future. Historically, Cederberg has seen average cash holdings below 6%; however, the manager does retain the ability to boost this level substantially in scenarios where markets appear overvalued and attractive ideas are difficult to find.
- **Generally Unhedged:** The portfolio will generally have exposure to the Hong Kong Dollar (fixed exchange rate), the Chinese Yuan (trades within a band established by the central bank) and the U.S. Dollar. This exposure is a function of the equities purchased. Cederberg does not speculate on currency and will usually hold shares unhedged. In circumstances where the local currency is meaningfully overvalued on a purchasing power parity basis, hedges may be deployed but this has been extremely rare.

Investment Instruments:

Cederberg invests only in listed public equities. Private equity is not part of the strategy. The firm may hedge currency via forwards and swap agreements.

Investment Team:

Dawid Krige leads the four-person investment team and is ultimately responsible for all portfolio decisions. Investment meetings are conducted via video conference between the Shanghai and London offices and team members regularly travel between the two offices. The team is based in London except for Daniel Ng who operates from the Shanghai office. All analysts are generalists. Key individuals are listed below.

Name	Role	Investment Team	Yrs. Experience Cederberg / Total	Prior Experience
Dawid Krige, CFA	Cederberg Founder and Chief Investment Officer	Yes	7/15	Mondrian, FirstRand
Daniel Ng	Head of Research	Yes	6/15	London Stock Exchange, Accenture
Da Wei Zhang, CFA	Analyst	Yes	3/9	JP Morgan, Tibra, UniCredit, Maven
Adeline Chong, CFA	Analyst	Yes	2/6	Lion Global, Barclays
Wikus van Derr Merwe, CGMA	Chief Operating Officer	No	2/15	Octopus Investments, Deloitte, RMB MultiManagers
Borch Du	Compliance Officer	No	4/8	Mondrian, HM Treasury
Peter Bowie	Chairman and Co-Founder	No	7/40	Deloitte



Investment Highlights:

- Uniquely Qualified Team and Structure
- Serves a Critical Unmet Role in the PSERS Portfolio
- Concentrated, Portfolio Construction Philosophy Delivers an Idiosyncratic Return Stream
- Attractive Fee Structure Eliminates the Risk of Paying for Beta

Investment / Risk Considerations:

- Key Person Risk
- Country and Geopolitical Risk
- Tracking Error and Temporary Periods of Underperformance
- Liquidity and Recent AUM Growth

Finance Committee Disclosure:

Relationship with Aksia:	None disclosed
Introduction Source:	Investment Office Staff
Placement Agent:	Not used
PA Political Contributions:	None disclosed
Potential Conflicts:	None disclosed
PSERS History with the Investment Manager:	This investment will be PSERS' first investment with the manager.
PSERS Allocation Implementation Committee Approval:	November 15, 2018

Oversight Responsibility:

Investment Office:	Thomas A. Bauer Raymond J. Schleinkofer Jeffrey R. Burton	Deputy CIO, Traditional Investments Senior Portfolio Manager Senior Portfolio Manager
External Consultant:	Aksia LLC	

Manager Recommendation Memo

November 8, 2018

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

Re: Cederberg Greater China Equity Fund

Dear Trustees:

Aksia LLC, having been duly authorized by the Board of PSERS, has evaluated and hereby recommends a direct allocation to Cederberg Greater China Equity Fund ("Cederberg" or the "Fund") in line with PSERS' Investment Policy Statement, Objectives, and Guidelines. It is further recommended that PSERS invest up to \$200 million in Cederberg.

Cederberg Capital was founded in 2011 by Dawid Krige, Peter Bowie and Louis Norval. Although originally from South Africa, Dawid (CIO and CEO) has spent the majority of his career in London. Before launching Cederberg, he had spent six years specializing in Chinese equities as a portfolio manager at Mondrian, a \$55bn long-only asset manager with several emerging market products. The Fund launched in January 2012 with \$12 million in seed capital. AUM grew steadily through 2017, which was an exceptional year in terms of performance. Assets stand at \$539 million as of September 2018.

Cederberg pursues a long-only, fundamentally-orientated strategy investing in Chinese equities, attempting to identify high quality businesses and construct a concentrated book of 15-20 names. By filtering for management team quality, businesses with durable moats, and the capabilities to compound capital, the manager hopes to capitalize on China's structural growth. The portfolio can be expected to have a tilt towards consumer-oriented (discretionary and staples), healthcare and communication services stocks. Cederberg invest in stocks across the market cap spectrum, however the majority of exposure is typically in large- and mega-cap stocks.

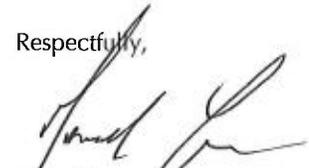
Aksia's recommendation is based upon the following analytical factors and is made within the context of PSERS' investment guidelines:

- Due diligence of the Cederberg's investment process, including a review of their investment strategy, investment team personnel and structure, and risk management;
 - Onsite investment due diligence visit conducted September 24, 2018
- Due diligence of Cederberg's operations, including an operations and infrastructure review, regulatory and compliance review, PPM review, Form ADV review, and Financial Statement Review;
 - On-site operational due diligence visit conducted September 18, 2018
- Evaluation of the Cederberg's strategy within the context of the current investment environment; and
- Appropriateness of Cederberg as a component of the PSERS portfolio.

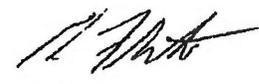
This recommendation is given solely for the benefit of PSERS and cannot be relied upon by other investors considering an investment in Cederberg, since their needs, objectives, and circumstances may not be identical to those of PSERS. The scope of this recommendation is limited to the investment merits of Cederberg. Aksia manager recommendation memos should be reviewed with other Aksia due diligence materials, including the due diligence reports. In addition, please consult your tax, legal and/or regulatory advisors before allocating to any private investment fund.

Please feel free to contact us should you have any questions about this recommendation.

Respectfully,



Joseph Larucci
 Partner, Head of Equity Strategies



Simon Fludgate
 Partner, Head of Operational Due Diligence