Private Equity, Royalties and Structured Credit: A Prescription for Healthcare Investing

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Healthcare investment strategies may generate significant current income.

EXECUTIVE SUMMARY

The healthcare sector is large, complex and growing at a faster rate than GDP in every major economy.[1] Purely on the basis of changing demographics, the sector is expected to be larger in five, ten and twenty years.[2] Despite this growth potential, most institutional investors do not think about their exposure to healthcare in the same way they may think about their exposure to other sectors such as real estate or energy. We believe healthcare merits the same consideration those other sectors receive. We find that healthcare exposure in many investors' portfolios is much smaller than the sector's expenditures in the overall economy. We believe that adjusting this relative under-allocation to healthcare can provide investors with additional exposure to a large and rapidly growing sector with an attractive risk/return profile. Additionally, certain healthcare investment strategies may generate significant current income which may be especially attractive to institutional investors.

BACKGROUND

It is difficult to open the newspaper without seeing articles on the healthcare sector. Top stories may include promising new medical therapies for hard-to-treat diseases, budget discussions about the impact of rising healthcare costs on government solvency, announcements of multi-billion dollar biotech company acquisitions and debates over the Affordable Care Act (ACA), better known as "Obama Care."

1 Sources: IMF Global Trends in Public Health Spending and the Outlook, 2011; Centers for Medicare & Medicaid Services Financial Report Fiscal Year, 2012.

2 Sources: Centers for Medicare & Medicaid Services, 2012; International Monetary Fund, 2012.

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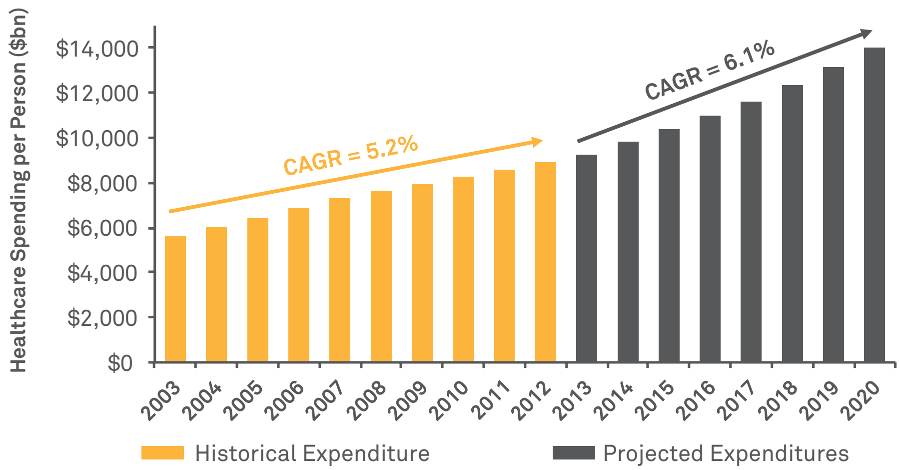
Demographic trends in developed countries virtually ensure that healthcare spending will increase.

Figure 1 shows that U.S. healthcare sector spending is massive, accounting for $9,250 per person in 2013 and spending is expected to grow at an increasing pace.

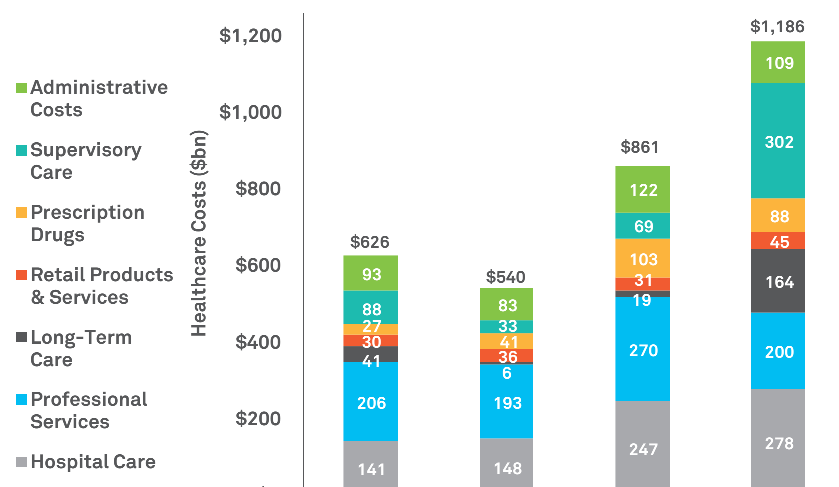
Figure 1: U.S. Healthcare Spending Per Person



Source: Centers for Medicare & Medicaid Services, 2012.

This massive spending is likely to increase for several reasons. For starters, demographic trends in developed countries virtually ensure that healthcare spending will increase. Age is one of the most significant variables in healthcare consumption. As Figure 2 shows, spending on Medicare beneficiaries in the U.S. (individuals over 65 years of age) is much higher than healthcare spending on younger populations. In the future, this older age group will represent an increasing portion of the overall population, pushing overall healthcare costs higher.

Figure 2: Current Healthcare Spending by Age Group in the U.S.



Age Group as a % of U.S. Population by Year	Age Group:	Under 25	25-44 Years	45-64 Years	65+ Years
	1950	42%	30%	20%	8%
	1970	45%	24%	21%	10%
	1990	37%	32%	19%	12%
	2010	34%	27%	26%	13%
	2030	31%	26%	23%	20%
	2050	30%	25%	24%	21%

Sources: United Nations – World Population Prospects: The 2012 Revision; Deloitte – The Hidden Cost of U.S. Healthcare: Consumer Discretionary Healthcare Spending, 2012.

INVESTING IN HEALTHCARE

The healthcare sector is not as accessible for investors as one might think. Investing in public stock markets can provide healthcare exposure, but, as Figure 3 shows, the exposure to healthcare in public market indices in both emerging and developed economies does not reflect healthcare spending's proportion of GDP in those same economies. Public markets also do not offer investors access to the small and mid-sized private companies that tend to be the most rapidly growing segment of the healthcare industry.

A significant portion of the healthcare sector is not open to direct investment.

Figure 3: Healthcare Composition of Public Market Indices

Country Exchange *Ticker*	Brazil *BOVESPA*	India *BSE Sensex*	Russia *RTS*	China *SSE*	Frontier Markets *MSCI*	U.S. *S&P 500*	Europe *MSCIEU*
Consumer	21%	12%	3%	4%	9%	23%	25%
Energy & Utilities	28%	30%	60%	24%	9%	14%	14%
Financial	22%	18%	21%	56%	51%	16%	20%
Healthcare	**-**	**4%**	**-**	**1%**	**2%**	**12%**	**13%**
Industrial	4%	12%	1%	10%	10%	10%	11%
Information Technology	1%	16%	-	-	-	19%	3%
Materials	20%	4%	11%	4%	4%	3%	9%
Telecom	4%	4%	4%	1%	15%	3%	6%

Source: Capital IQ, 2013

The U.S. healthcare sector represents only approximately 12 percent of public equity indices versus 18 percent of U.S. GDP, as shown in Figure 4. One reason for this is that not-for-profit organizations are major players in the healthcare sector. For example, hospital services count for more than 25 percent of the healthcare sector and 80 percent of those hospitals are not-for-profit or government-owned.[3] This means that a significant portion of the healthcare sector is not open to direct investment.

Figure 4: Healthcare Spending Compared to GDP

	Healthcare GDP ($bn)	% of GDP	GDP Growth	HC Growth
United States	**$2,708**	**18%**	**3%**	**6%**
European Union	**$1,569**	**10%**	**2%**	**7%**
Japan	**$424**	**8%**	**1%**	**3%**
BRICs	**$607**	**5%**	**7%**	**13%**
Brazil	*$188*	*9%*	*4%*	*12%*
Russia	*$80*	*5%*	*4%*	*14%*
India	*$69*	*4%*	*8%*	*11%*
China	*$270*	*5%*	*9%*	*13%*

Sources: World Health Organization: 2010 Global Health Expenditure; CMS, 2011.

3 Source: American Hospital Association Fast Facts, 2012.

Healthcare private capital investment strategies fall into three main categories.

HEALTHCARE PRIVATE CAPITAL

The earliest funds that invested in healthcare tended to be multi-sector in focus with one or a few investment professionals focused on healthcare investments. Over the last 20 years, more dedicated firms have been created, due in part to recognition that investing in this sector requires a lot of expertise. In addition to many healthcare-focused firms, many generalist firms continue to devote portions of their investment vehicles to healthcare opportunities. There are over 305 managers in the U.S. who focus on healthcare and several hundred more that identify healthcare as a sector of interest.[4]

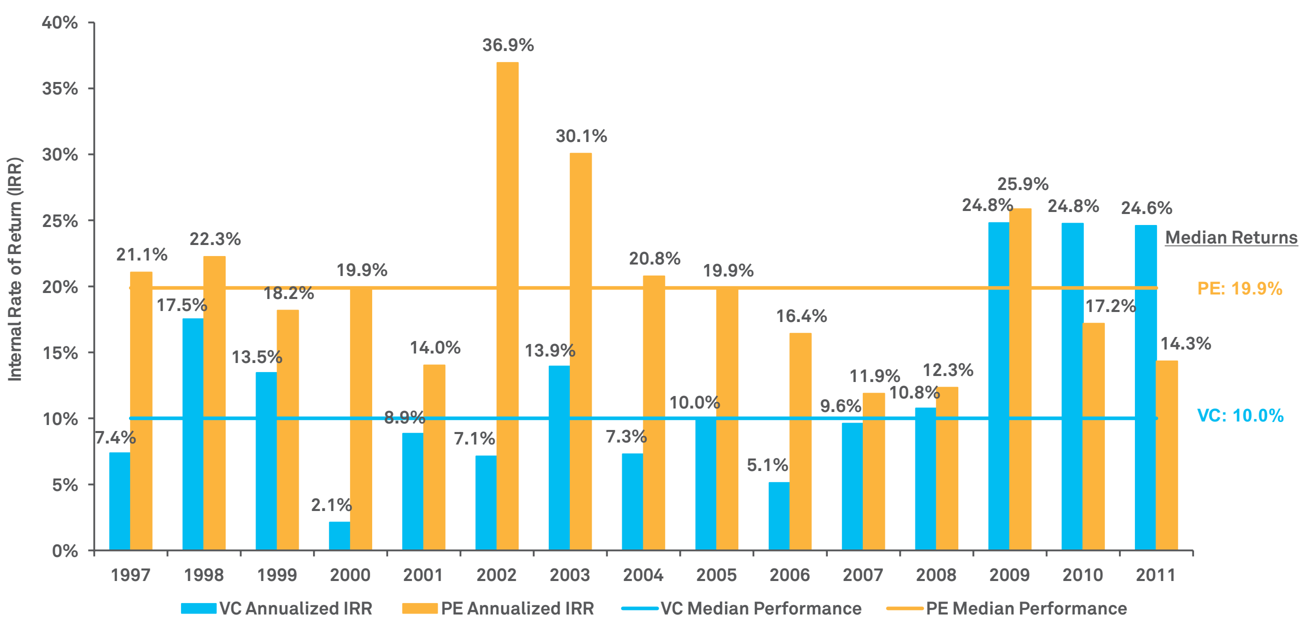
Healthcare private capital investment strategies fall into three main categories: venture capital, private equity and royalties and structured credit. Each category may be attractive or unattractive at a given point in time and we opportunistically invest based on our views of capital scarcity or excess as well as the attractiveness of specific opportunities. We currently believe that attractive investment opportunities in healthcare can best be accessed through private equity and royalties and structured credit strategies.

Venture Capital

The majority of investment managers who target healthcare do so through venture capital investment strategies. In fact, venture capital is the strategy that comes to mind for most limited partners when they think about the healthcare sector. This strategy focuses on research and development (R&D) stage companies (seed, early, middle or late stage development) with potential breakthrough technologies. These companies typically have negative cash flow and are funded by syndicates of venture and corporate investors who hope to sell or IPO the companies after establishing proof of concept for the new technology.

As shown in Figure 5, healthcare venture capital returns have historically been lower and more volatile than healthcare private equity returns. During the previous decade, too much capital created too many companies seeking too few exits. As a consequence of poor returns and general skepticism among limited partners, many managers have struggled to raise funds. In our opinion, the outlook for healthcare venture capital remains challenging.

Figure 5: Healthcare Returns Over Time – Private Equity vs. Venture Capital



Source: Cambridge Associates, 2013. Returns are aggregated at the deal level.

4 Source: Siguler Guff estimates as of December 31, 2013.

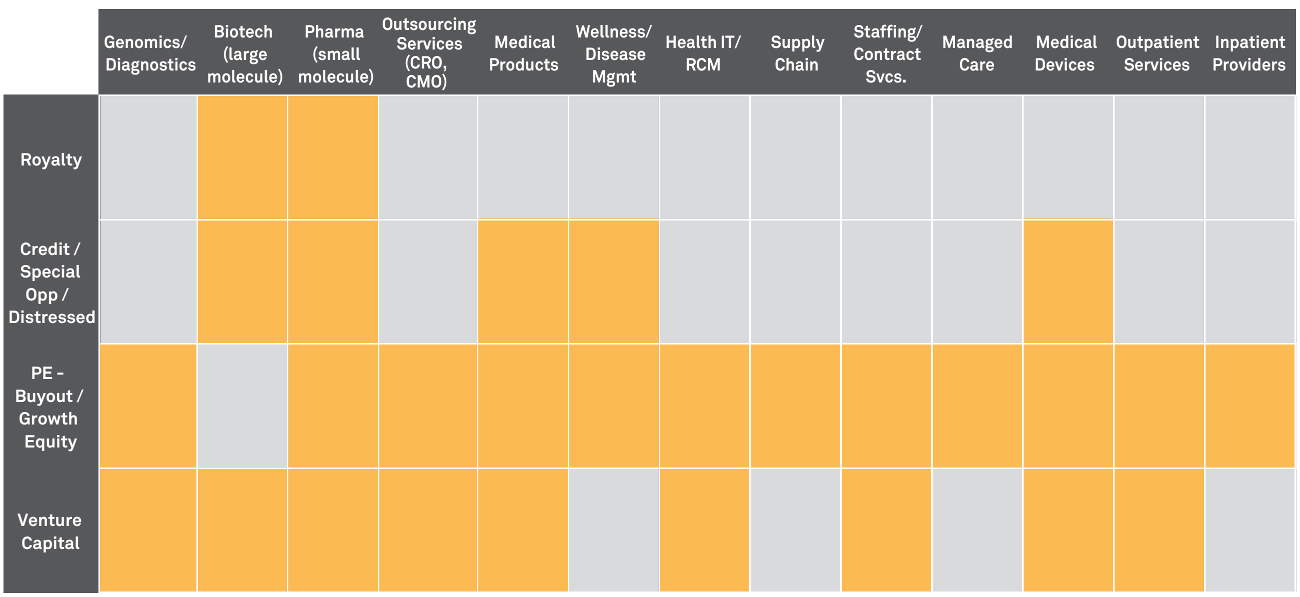
Private Equity

Healthcare private equity is a strategy that targets investments in commercial-stage healthcare companies. We estimate that there are as many as 50,000 commercial-stage healthcare companies in the U.S. These include a wide array of businesses such as service providers (e.g., clinics, for-profit hospitals and surgery centers), product companies (e.g., pharmaceuticals, devices and equipment), contract research, product distribution, insurance and outsourced business services. As shown in Figure 6, we estimate that there are over 60 different sub-sectors in the healthcare industry (shading represents sectors that we believe are attractive).

Healthcare has the highest level of return per increment of risk.

The healthcare sector not only contains a wide variety of business types, we find that these companies tend to be widely dispersed throughout the U.S. This is because companies that provide healthcare services are needed in approximate proportion to population sizes. The healthcare sector is large, complex and fragmented in terms of business types, business sizes and geographic dispersion, perhaps even more so than other industries. We believe these characteristics create structural inefficiencies in deal sourcing and pricing that present the potential to earn attractive returns. We estimate there are more than 50 managers dedicated to healthcare private equity and several hundred more who invest in the healthcare sector through non-dedicated investment vehicles. We find that managers tend to concentrate on specific sub-sectors of the market in order to increase their knowledge and enhance their deal flow.

Figure 6: Healthcare Sub-Sectors



Source: Siguler Guff

Risk-adjusted IRR, created by analyzing sector returns versus sector volatility, is another interesting statistic. Figure 7 shows that healthcare has the highest level of return per increment of risk. We believe that these historical returns are telling in that they show that healthcare private equity has been a good correlate for the overall growth and low volatility of the healthcare sector.

Figure 7: Risk-Adjusted Returns for Various Sectors (1997-2011)

Vertical	IRR by Sector	Standard Deviation of Returns by Sector	Median IRR/ Standard Deviation
Electronics	7.0%	29.7	0.2
Chemicals / Materials	9.5%	36.1	0.3
Environmental	13.2%	31.9	0.4
Information Technology	15.5%	30.6	0.5
Media / Communications	8.7%	14.4	0.6
Energy	27.7%	31.2	0.9
Software / Services	23.4%	20.4	1.2
Financial Services	15.6%	10.6	1.5
Consumer / Retail	15.5%	10.2	1.5
Manufacturing	16.9%	10.5	1.6
Industrial	21.5%	12.0	1.8
Healthcare / Biotech	**19.8%**	**8.4**	**2.4**
Median	**15.5%**	**17.4**	**1.0**
Mean	**16.2%**	**20.5**	**1.1**
High	**27.7%**	**36.1**	**2.4**
Low	**7.0%**	**8.4**	**0.2**

Source: Cambridge Associates Private Equity Report, June 2013.

Healthcare private equity will continue to be an attractive investment area for several reasons.

We believe that healthcare private equity will continue to be an attractive investment area for several reasons. First, we believe that the healthcare sector will continue to grow as suggested by the demographic drivers referred to earlier. Second, we believe that commercial healthcare companies are well-positioned to capture this growth because their revenue increases will be closely correlated with increased spending. Lastly, there are so many healthcare businesses, especially at the small end of the market, that there tends to be inefficiencies in pricing, which we believe can be exploited by private equity.

Royalties and Structured Credit

The royalties and structured credit strategy is another approach to investing in healthcare. Royalties are contracts to receive payments based on the sales of products in return for use of the intellectual property that underlies those products. Royalty agreements are created when intellectual property rights are transferred between individuals, academic institutions and companies. Related to drug and biotechnology royalties is an adjacent space that we refer to as *healthcare structured credit*, which includes loans, typically senior, backed by revenue-generating product assets. These loans usually bear high coupons and contain equity incentives such as warrants. Often these loans have liens against intellectual property, including patents, regulatory filings and other assets as collateral. Royalties have features of both fixed income and equity investments. The cash flows are immediate, but they vary based on actual sales of the product.

The royalty market has expanded considerably over the last 20 years due to growth in the drug and biotechnology industries and increases in the number of royalty contracts. We estimate that there is an addressable royalty market in the U.S. of approximately $65 billion.[5] There are more than ten managers who specialize in royalties and structured credit in the U.S. We have seen that deal flow is very lumpy. Large transactions come in waves, which makes traditional private equity fund structures suboptimal because slow capital deployment in the early years of a fund can negatively impact returns. Lastly, we believe that the strong bull market in credit has resulted in companies with weak collateral being financed through royalty and debt capital.

5 Capital Royalty deal list, L.E.K. analysis.

We believe that the royalties and structured credit strategy is interesting, but we have observed firsthand some of the challenges that it poses. The attractive features of the strategy are that investors are able to avoid development risks and capture senior cash flows from high margin healthcare product assets. We believe that the best approach to this strategy is to participate opportunistically and outside of traditional private equity fund structures.

SUMMARY AND OUTLOOK

The healthcare sector is large, complex and seems to be growing faster and with less volatility than other sectors. The sector's high growth and low cyclicality should make it attractive to investors. There are a number of strategies investors can use to access the healthcare sector. Ideally, investors could develop approaches which capture the good market return (β) and add excess return (α) by flexibly allocating to the right strategies, sub-sectors and deals within the sector.

Achieving the best allocation to healthcare poses challenges.

Achieving the best allocation to healthcare poses challenges. There are several strategies to consider and one must also take into account many variables that shape the sector such as policy, technology and reimbursement to name a few. Successfully navigating this landscape requires significant sector expertise. In addition, the numerous opportunities tend to be widely dispersed, which means that sourcing potential investments can pose challenges.

We find that the best approach is to pursue healthcare private equity and royalties and structured credit strategies that focus on commercial-stage investment opportunities. Within these strategies, we feel that the best investment approach is one that incorporates a significant knowledge base and experience in the healthcare sector, broad sourcing capabilities, and a strong view on the types of opportunities that are attractive given the sector's rapid evolution and growth.

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