Trends in Debt Valuations of Private Equity-Backed Dermatology Groups Before and During the COVID-19 Pandemic

Rohail Memon, BA; Abdullah Memon, MD; Joseph Francis, MD; Sailesh Konda, MD

**IMPORTANCE** Private equity (PE) firms have invested in and consolidated dermatology practices. Private equity firms typically operate by conducting leveraged buyouts, which occur when target companies are acquired with capital from PE firms and a combination of debt, which may include debt instruments held in business development corporations (BDCs).

**OBJECTIVE** To investigate the valuations of dermatology PE-backed group (DPEG) debt instruments in BDCs’ portfolios both before and during the COVID-19 pandemic.

**DESIGN, SETTING, AND PARTICIPANTS** This cross-sectional study, conducted from August 1, 2016, to August 31, 2021, examined public financial statements filed by BDCs lending to DPEGs. The public filings of BDCs were searched from inception of the DPEG’s debt instrument in a BDC’s portfolio, and the amortized cost and fair value of each debt instrument were tabulated.

**MAIN OUTCOMES AND MEASURES** The premium or discount at which each debt instrument was valued at a given time was calculated by dividing the difference between the fair value and the amortized cost by the amortized cost. Different testing methods were conducted for normal or nonnormal data to test differences in debt valuations across all DPEGs between 2 consecutive or nonconsecutive quarters.

**RESULTS** The search of the public filings found 10 BDCs containing data on 9 unique DPEGs. Overall, there were 15 trackable DPEG debt instruments because multiple BDCs can hold debt instruments for a given DPEG. Data were available from August 2016 through August 2021. During the study time frame, the amortized cost of the loans for an individual DPEG ranged from a low of $1.7 million to a high of $100 million. The valuation of debt instruments was stable for many DPEGs until some were discounted starting in May 2018, with a significant decrease from May 2019 to August 2019 (-1.4%; 95% CI, not applicable; P = .04), prior to the COVID-19 pandemic. Another significant decrease occurred during the pandemic from February to June 2020 (-9.0%; 95% CI, -13.6% to -4.4%; P = .002). US Dermatology Partners decreased to the lowest valuation (Golub BDC, -39.7%; TCG BDC Inc, -48.8%; TCG BDC II, -48.8%) of the DPEGs examined in November 2020 even after receiving a $10 million forgivable Small Business Administration Paycheck Protection Program loan in May 2020. After pharmaceutical companies announced effective COVID-19 vaccine candidates in November 2020, there was a modest and significant improvement in debt valuations (2.3%; 95% CI, 0.2%-0.4%; P = .03); however, they remained discounted. Only PhyNet Dermatology’s debt instruments improved to a premium valuation by August 2021.

**CONCLUSIONS AND RELEVANCE** Debt valuations of some DPEGs found in this cross-sectional study suggest a lower probability that their loans will be repaid in full. This could be a signal that some DPEGs are not performing well financially.
During the past decade, private equity (PE) firms have fueled the consolidation of dermatology practices, with more than 30 dermatology PE-backed groups (DPEGs). Dermatology is an attractive target and has been recession-resistant during past economic downturns. Dermatology PE-backed groups state there is safety and security in economies of scale; however, dermatologists are concerned about PE’s effect on their profession and patients. The evolution of DPEGs and their investment objectives, including acquiring or opening practices, leveraging physician assistants and nurse practitioners, maximizing profitability, and ultimately selling to another entity in 3 to 7 years, has been detailed previously. Some DPEGs may merge with each other, as seen recently with Water’s Edge and Riverchase Dermatology, and the next buyer may be another PE firm, a health care conglomerate, the public via an initial public offering, or an insurance company.

Private equity firms typically operate by conducting leveraged buyouts, which occur when target companies are acquired with (1) capital from the PE firms’ limited and general partners and (2) a combination of debt. Sources of financing include senior debt, subordinated debt, hybrid financing, and equity (Table 1). A typical capital structure is composed of 30% equity contributed by the firm and 70% debt financing from banks. Typically, of the 70% that is debt financing, 50% is senior debt and the remaining 20% is subordinated debt. Private equity firms can also reduce their tax bills by deducting debt interest payments on borrowed capital and using an accounting technique called “carried interest.”

Debt financing for leveraged buyouts is raised largely from banks as syndicated loans, which the banks then portion out and sell to institutional investors, including mutual funds, hedge funds, and other special-purpose investment vehicles. This allows the originating bank to have only a small amount of the loan on their balance sheet. Over time, institutional investors created public business development corporations (BDCs), which are closed-end investment firms that give nonaccredited retail investors access to private credit markets. Business development corporations are key players in the $812 billion private credit market and many hold debt instruments used in PE acquisition financing. Because BDCs are registered under the Securities Act of 1933 and Securities Exchange Act of 1934, they are required by the US Securities and Exchange Commission (SEC) to follow certain registration and reporting requirements. Accordingly, BDCs report which debt instruments they hold in their portfolios, the cost of the debt, and a good-faith estimate of the fair value of the debt at that time. This reporting helps investors assess the given premium or discount of the debt, which is calculated by taking the fair value of the debt divided by the amortized cost of the debt. These debt instruments and associated valuations are specific to DPEGs and have no relationship with other investments made by PE firms.

Sizable acquisitions by PE firms are associated with larger debt loads and higher interest rates. Thus, DPEGs must service larger principals and interest payments compared with other practice models that typically have fewer offices and lower debt loads. Key factors in debt pricing are supply and demand, term to maturity, and quality of the debt. A premium on the debt indicates that the market believes the debt to be of high quality and will yield returns until maturity. Discounting of debt indicates that the market believes the company will cease to meet its debt obligations. These debt valuations can fluctuate based on the market’s perception of a DPEG’s financial strength and their ability to service the debt. Currently, the US is in a period of very low interest rates, which minimizes the possibility of rising interest rates contributing to discounting of debt.


The purpose of this study is to investigate the valuations of DPEG debt instruments in BDCs’ portfolios both before and during the COVID-19 pandemic.

Table 1. Corporate Capital Structure*

<table>
<thead>
<tr>
<th>Capital structure</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Senior secured bonds</td>
<td>These are the highest priority in a liquidation event. Senior creditors are paid in full first before subordinated notes and equity holders are paid. These carry the least risk and lowest interest rate. This debt is secured by pledged asset collateral.</td>
</tr>
<tr>
<td>Senior unsecured bonds</td>
<td>Similar to senior secured bonds, senior creditors are paid in full first before subordinated notes and equity holders are paid. However, this debt is riskier as there is no pledged asset collateral.</td>
</tr>
<tr>
<td>Subordinated debt</td>
<td>This class of loans ranks below senior debt with the ability to claim assets. This leads to a greater risk and higher interest rates. This can also be known as mezzanine or junior debt.</td>
</tr>
<tr>
<td>Hybrids</td>
<td>This type of instrument is in publicly traded companies and has both equity and debt features. This includes convertible bonds, which are the most common type of hybrid financing. Convertible bonds are inherently bonds that can later be converted into equity.</td>
</tr>
<tr>
<td>Equity</td>
<td>This is the junior-most level of the capital structure and has the highest risk and highest potential returns. After all debt holders above have been paid in full, then equity holders can claim assets.</td>
</tr>
</tbody>
</table>

* Adapted from Zhu.®
Debt Valuations of Private Equity-Backed Dermatology Groups Before and During the COVID-19 Pandemic

Original Investigation Research

Debt Valuationsof PrivateEquity–Backed DermatologyGroupsBefore and Duringthe COVID-19 Pandemic

during the COVID-19 pandemic through August 2021. Trends in BDC debt valuations may provide a window into the financial health of DPEGs. Business development corporations are being investigated in this study because they are the only publicly reported debt instrument for DPEGs. Many other forms of debt instruments could not be investigated owing to the lack of public reporting requirements for PE firms and their other sources of financing. eAppendix I in the Supplement has a glossary of terms.

Methods

Analysis of Financial Statements

This cross-sectional study, conducted from August 1, 2016, to August 31, 2021, examined public financial statements filed by BDCs lending to DPEGs. The SEC has compiled the BDC Report, a comprehensive list of BDCs based on their filings, since 2012. The BDC Report for 2020, available on the SEC’s website, was searched for publicly available BDCs.22 The report contained 127 BDCs, which were reviewed to find BDCs actively filing Form 10-Ks (annual reports) and 10-Qs (quarterly reports) with data available on debt valuations. The “active” period was defined as a BDC having filed a Form 10-K or 10-Q in 2020 to capture data on BDCs filing during the COVID-19 pandemic. These search parameters resulted in 79 BDCs with active quarterly and annual filings in 2020. Next, these BDCs’ Forms 10-Ks and 10-Qs were searched for the terms “derm,” “skin,” and “healthcare” to find relevant DPEGs. In addition, we searched for DPEGs and their management service organizations as previously outlined by Konda et al.2 The quarterly and annual filings of these BDCs were searched from inception of the DPEG’s debt instrument in a BDC’s portfolio and the amortized cost and fair value of each debt instrument was tabulated. The premium or discount each debt instrument was valued at a given time was calculated by dividing the difference between the fair value and amortized cost by the amortized cost (Table 2). Prior to statistical analysis, the premium or discount for a DPEG with debt instruments held by multiple BDCs was then calculated by dividing the difference between the sum of their fair values and the sum of their amortized costs by the sum of their amortized costs. This study was approved by the University of Florida Health Science Center institutional review board, with a waiver of consent because all data were publicly available. This study followed the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) reporting guideline.

Statistical Analysis

Statistical analysis was performed in September 2021 using R, version 4.0.5 (R Group for Statistical Computing).33 The Shapiro-Wilk test was performed to test for normality of the data (α = .05). Then, different testing methods were conducted for nonnormal (Wilcoxon signed-rank test; nonparametric) or normal (paired t test; parametric) data to test differences in debt valuations across all DPEGs between 2 consecutive or nonconsecutive quarters (Table 3). All P values were from 2-sided tests and results were deemed statistically significant at P < .05.

Results

Our search found 10 BDCs containing data on 9 unique DPEGs. Overall, there were 15 trackable DPEG debt instruments because multiple BDCs can hold debt instruments for a given DPEG (eAppendix 2 in the Supplement). The earliest available data for this cohort of BDCs were from August 2016. During the study time frame, the amortized cost of the loans for an individual DPEG ranged from a low of $1.7 million to a high of $100 million. These publicly available loan amounts may represent only a portion of the syndicated loan arranged for the leveraged buyout. Examination of the data reveals several longitudinal trends and significant changes in debt valuations (Figure and Table 2). The valuation of debt instruments was stable for many DPEGs until some were discounted, starting with Platinum Dermatology (AB Private BDC, −0.1%) during quarter 8 (May 2018), prior to the COVID-19 pandemic. Seven other DPEGs went from premium to discounted valuations from quarter 9 (August 2018) to quarter 14 (November 2019). Statistical analysis (Table 3) found a significant decrease in debt valuations from quarter 12 (May 2019) to quarter 13 (August 2019) (-1.4%; 95% CI, not applicable; P = .04).

As the COVID-19 pandemic continued, the debt valuations for all DPEGs decreased and were discounted by quarter 15 (February to March 2020) and quarter 16 (May to June 2020). West Dermatology was acquired by Sun Capital Partners during the pandemic and started at a discounted valuation (Sierra BDC, −11.1%; CION BDC, −5.9%) during quarter 16 (May to June 2020).3 Statistical analysis found another significant decrease in debt valuations from Q15 (February to March 2020) to Q16 (May to June 2020) of −9.0% (95% CI, −13.6% to −4.4%; P = .002) (Table 3). US Dermatology Partners decreased to the lowest valuation (Golub BDC, −39.7%; TCG BDC Inc, −48.8%; TCG BDC II, −48.8%) of the DPEGs examined during quarter 18 (November 2020).

After pharmaceutical companies announced effective COVID-19 vaccine candidates in November 2020, there was a modest improvement in debt valuations; however, they remained discounted. Statistical analysis found a significant improvement in debt valuations from quarter 17 (August 2020) to quarter 18 (November 2020) (2.3%; 95% CI, 0.2%-4.3%; P = .03). In addition, when postvaccine announcement quarter 18 (November 2020) and quarter 19 (February to March 2021) were compared with prepandemic quarter 14 (November to December 2019), debt valuations were still significantly decreased (quarter 18 vs 14, −5.7%; 95% CI, not applicable; P = .03; and quarter 19 vs 14, −4.6%; 95% CI, not applicable; P = .01). This decrease became nonsignificant when quarter 20 (May 2021) and quarter 21 (August 2021) were compared with quarter 14 (quarter 20 vs 14, −2.9%; 95% CI, not applicable; P = .55; and quarter 21 vs 14, −3.2%; 95% CI, −8.9% to 2.5%; P = .21). Only PhyNet Dermatology’s debt instruments improved to a premium valuation by quarter 21 (August 2021).
### Table 2. Premium or Discount of Private Equity–Backed Dermatology Group Debt Instruments

| BDC | Amortized cost of debt instrument, $ | Q1 | Q2 | Q3 | Q4 | Q5 | Q6 | Q7 | Q8 | Q9 | Q10 | Q11 | Q12 | Q13 | Q14 | Q15 | Q16 | Q17 | Q18 | Q19 | Q20 | Q21 |
|-----|------------------------------------|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Oliver Dermatology & Dermatology Associates, % | 8376 to 27 872 | 1.4 | 2.8 | 2.7 | 2.5 | 2.4 | 2.2 | 2.0 | 2.1 | 2.0 | 1.9 | 1.7 | -8.6 | -13.8 | -16.4 | -20.9 | -42.2 | -40.9 | -39.7 | -26.1 | -26.0 | -25.9 |
| TCG BDC | 29 729 to 56 055 | 0.3 | 1.7 | 1.7 | 0.9 | 0.4 | 0.7 | 0.7 | 0.4 | 0.6 | 0.6 | -0.5 | -7.1 | -14.0 | -30.4 | -29.1 | -44.2 | -47.0 | -48.8 | -49.7 | -41.7 | -38.8 |
| TCG BDC II | 1361 to 16 175 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 11.8 | 1.7 | 1.5 | -0.1 | -6.7 | -13.7 | -30.3 | -28.9 | -44.1 | -46.8 | -48.8 | -49.6 | -41.6 | -38.8 |
| Advanced Dermatology and Cosmetic Surgery, % | 20 823 to 43 453 | 2.0 | 2.9 | 2.8 | 2.6 | 2.5 | 0.3 | 0.4 | 0.3 | 0.2 | 0.0 | 1.9 | 1.8 | 1.6 | -1.5 | -1.4 | -6.2 | -4.1 | -3.9 | -0.8 | -0.7 | NA |
| Riverchase Dermatology and Cosmetic Surgery, % | 3984 to 9951 | NA | NA | -0.1 | 1.4 | 1.4 | 1.3 | 1.2 | 1.2 | 1.1 | 1.0 | 1.0 | 0.9 | 0.9 | -1.8 | -1.7 | -10.4 | -8.3 | -3.0 | -2.9 | -0.8 | NA |
| United Derm Partners, % | 5840 to 13 877 | NA | NA | NA | NA | 0.9 | 0.9 | 1.0 | 0.9 | -3.2 | -2.8 | -1.8 | -8.7 | -6.7 | -1.6 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 | -0.1 |
| PhyNet Dermatology, % | 50 391 to 77 965 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Solar | 9551 to 17 125 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Dermatologists of the Central States, % | 1243 to 1477 | NA | NA | NA | NA | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Sierra | 2896 to 3398 | NA | NA | NA | NA | NA | NA | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Audax | 819 to 977 | NA | NA | NA | NA | NA | NA | 0.4 | 0.3 | 0.3 | 0.3 | 0.4 | 0.4 | 0.3 | 0.2 | 0.8 | -1.1 | -0.7 | -3.5 | -2.7 | -3.3 | -1.1 | -2.5 |
| West Dermatology, % | 6409 to 7124 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 11.1 | 9.9 | -18.8 | -3.9 | -1.3 | -2.1 | -11.1 | -9.9 | -18.8 | -3.9 | -1.3 | -2.1 |
| CION | 11 011 to 12 207 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | 5.9 | 8.5 | 4.6 | 4.0 | -4.0 | -3.5 | -11.1 | -9.9 | -18.8 | -3.9 | -1.3 | -2.1 |
| Pinnacle Dermatology, % | 1736 to 9702 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | -0.2 | -0.6 | -0.4 | -0.5 | -0.7 | -0.6 | -0.5 | -9.8 | -7.6 | -2.6 | -1.1 | -1.2 | -0.5 |
| Platinum Dermatology, % | 5327 to 7360 | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA | -0.1 | -0.2 | -0.2 | -0.3 | -0.4 | -0.5 | -0.4 | -0.6 | -6.3 | -22.6 | -21.3 | -16.8 | -17.5 | -18.7 | -11.6 |

Abbreviations: AB, AllianceBernstein; BDC, business development corporation; NA, not applicable; Q, quarter. 

Some quarters have a range of dates as publicly traded BDCs may file a 10-K (annual report) or 10-Q (quarterly report) on different dates within a given quarter. 

During study time frame (in thousands). 

US Dermatology Partners is doing business as Oliver Street Dermatology Holdings, LLC; US Dermatology Partners was formerly Dermatology Associates.
### Table 3. Wilcoxon Signed-Rank Test or Paired t Test for Differences in Debt Valuations Between Consecutive and Nonconsecutive Quarters

<table>
<thead>
<tr>
<th>Comparison group</th>
<th>Testing method</th>
<th>P value</th>
<th>Difference, % (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consecutive quarters</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q2-Q1</td>
<td>Nonparametric</td>
<td>.50</td>
<td>1.2 (NA)</td>
</tr>
<tr>
<td>Q3-Q2</td>
<td>Nonparametric</td>
<td>.40</td>
<td>0.9 (NA)</td>
</tr>
<tr>
<td>Q4-Q3</td>
<td>Parametric</td>
<td>.79</td>
<td>0.2 (-2.7 to 3.1)</td>
</tr>
<tr>
<td>Q5-Q4</td>
<td>Parametric</td>
<td>.47</td>
<td>-0.5 (-2.2 to 1.2)</td>
</tr>
<tr>
<td>Q6-Q5</td>
<td>Parametric</td>
<td>.45</td>
<td>-0.5 (-1.9 to 1.0)</td>
</tr>
<tr>
<td>Q7-Q6</td>
<td>Parametric</td>
<td>.62</td>
<td>-0.02 (-0.1 to 0.08)</td>
</tr>
<tr>
<td>Q8-Q7</td>
<td>Parametric</td>
<td>.63</td>
<td>-0.2 (-0.9 to 0.6)</td>
</tr>
<tr>
<td>Q9-Q8</td>
<td>Nonparametric</td>
<td>.47</td>
<td>-0.2 (NA)</td>
</tr>
<tr>
<td>Q10-Q9</td>
<td>Parametric</td>
<td>.64</td>
<td>-0.2 (-0.8 to 0.5)</td>
</tr>
<tr>
<td>Q11-Q10</td>
<td>Nonparametric</td>
<td>≥ .99</td>
<td>0.08 (NA)</td>
</tr>
<tr>
<td>Q12-Q11</td>
<td>Nonparametric</td>
<td>.14</td>
<td>-0.9 (NA)</td>
</tr>
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<td>Q13-Q12</td>
<td>Nonparametric</td>
<td>.04b</td>
<td>-1.4 (NA)</td>
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<td>Q14-Q13</td>
<td>Nonparametric</td>
<td>.53</td>
<td>-2.2 (NA)</td>
</tr>
<tr>
<td>Q15-Q14</td>
<td>Nonparametric</td>
<td>.94</td>
<td>-0.6 (NA)</td>
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<td>Q16-Q15</td>
<td>Parametric</td>
<td>.002b</td>
<td>-9.0 (-13.6 to -4.4)</td>
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<td>Q17-Q16</td>
<td>Parametric</td>
<td>.26</td>
<td>0.9 (-0.8 to 2.8)</td>
</tr>
<tr>
<td>Q18-Q17</td>
<td>Parametric</td>
<td>.03b</td>
<td>2.3 (0.2 to 4.1)</td>
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<tr>
<td>Q19-Q18</td>
<td>Parametric</td>
<td>.05</td>
<td>1.6 (-0.04 to 3.3)</td>
</tr>
<tr>
<td>Q20-Q19</td>
<td>Parametric</td>
<td>.13</td>
<td>1.2 (-0.4 to 2.8)</td>
</tr>
<tr>
<td>Q21-Q20</td>
<td>Parametric</td>
<td>.21</td>
<td>1.5 (-1.1 to 4.1)</td>
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<td>Nonconsecutive quarters</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q18-Q14</td>
<td>Nonparametric</td>
<td>.03b</td>
<td>-5.7 (NA)</td>
</tr>
<tr>
<td>Q19-Q14</td>
<td>Nonparametric</td>
<td>.02b</td>
<td>-4.6 (NA)</td>
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<td>Q20-Q14</td>
<td>Nonparametric</td>
<td>.55</td>
<td>-2.9 (NA)</td>
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<tr>
<td>Q21-Q14</td>
<td>Parametric</td>
<td>.21</td>
<td>-3.2 (-8.9 to 2.5)</td>
</tr>
</tbody>
</table>

Abbreviations: NA, not applicable; Q, quarter.

*First, the Shapiro-Wilk test was used to test normality of the data (α = .05). Then, different testing methods were conducted for normal or nonnormal data. Wilcoxon signed-rank test (nonparametric) was performed for nonnormal data or the paired t test (parametric) was performed for normal data.

b P < .05.

### Figure. Trends in Debt Valuations of Premium or Discount of Private Equity-Backed Dermatology Group Debt Instruments

- US Dermatology Partners
- Advanced Dermatology and Cosmetic Surgery
- Riverchase Dermatology and Cosmetic Surgery
- United Derm Partners
- PhyNet Dermatology
- Dermatologists of Central States
- West Dermatology
- Pinnacle Dermatology
- Platinum Dermatology
- Preparandemic decrease in debt valuations
- WHO declares COVID-19 a global pandemic
- Pharmaceutical companies announce effective vaccine candidates

WHO indicates World Health Organization.
Discussion

Private equity firms’ portfolio companies perform well during economic expansions, but perform poorly during economic contractions, such as a pandemic. The first devaluation of debt occurred between May and August 2019, which is significant as this was during an economic expansion and prior to the COVID-19 pandemic. The second devaluation of debt was wider between February and May 2020 after the World Health Organization declared COVID-19 a global pandemic. Some dermatology clinics closed during the pandemic, while others, including some DPEGs, chose to stay open to minimize revenue loss. Dermatology PE-backed groups are still responsible for making debt payments to debt holders when their revenue decreases during economic contractions. Debt holders, such as BDCs, noticed the financial strain placed on DPEGs before and during the pandemic, were concerned about defaults on loans, and discounted the debt (Figure and Table 3). After vaccine development, debt valuations for some DPEGs modestly improved; however, many remain discounted and below prepandemic levels, as the market believes they will be unable to meet their debt obligations. PhyNet Dermatology, a nascent DPEG with only a single PE firm buyout in 2017, may have less debt, which could explain its premium debt valuations as of August 2021.

Private equity firms have experienced boom-and-bust cycles since the 1980s. Coinciding with the bust in the early 2000s, 8 of the 10 largest publicly traded physician practice management groups declared bankruptcy. Dermatology PE-backed groups started with a boom in the 2010s and several struggled even prior to the pandemic. US Dermatology Medical Management Inc became insolvent near the end of 2011, DermOne Dermatology was dissolved in 2018, and Select Dermatology and TruDerm are no longer in existence. Advanced Dermatology and Cosmetic Surgery and The Dermatology Group closed some of their offices. In addition, US Dermatology Partners, which has the most heavily discounted debt instruments, defaulted on a $377 million direct lender loan in February 2020. Our data showed a trend of downward discounting of debt prior to US Dermatology Partners announcing they would be unable to pay back their loan.

The pandemic affected health care delivery across specialties and practice models. The American Medical Association found that Medicare physician spending for dermatology had a 24% cumulative reduction from January to June 2020. A separate survey of 970 dermatologists found that the COVID-19 pandemic had a significant effect from the third week in February 2020 to the third week in March 2020. The mean number of patients seen decreased from 149.4 to 63.4, practice days decreased from 4.2 to 3.1, and number of biopsies decreased from 19.8 to 7.7. A follow-up study found that mean weekly patient visits significantly decreased from 149.7 in the middle of February 2020 to 28.2 in the middle of April 2020 and then rebounded to 96.5 in the middle of May 2020. The authors estimated practice revenue decreasing $3 billion to $3.5 billion secondary to the pandemic. A decrease in revenue can deprive operating income and lead to DPEGs having unmanageable debt loads and stretched valuations.

The pandemic affected PE firms; the number of global buyout transactions decreased 60% during the first quarter of 2020. Private equity fundraising decreased and, even though there was still substantial investment capital, both buyers and sellers were hesitant given the volatility and uncertainty of the market. United States PE deal making rebounded by the end of 2020 and, as the economy reopened in 2021, it soared with elevated valuations, supported by cheap debt, investment capital, institutional investors, and a looming capital gains tax increase. The buyout boom in 2021 has approached levels not seen since before the 2008 financial crisis and PE firms are using near-record levels of debt to buy companies.

The Wilshire BDC Index measures the performance of publicly traded US BDC securities that focus on debt financing of companies. The index decreased in March 2020 and, as of August 2021, had increased back to prepandemic levels. The index largely reflects the valuations of debt holdings of BDCs and typically performs well when debt holdings are performing well. However, BDC debt valuations of DPEGs debt instruments remain largely discounted and below prepandemic levels.

The Coronavirus Aid, Relief, and Economic Security (CARES) Act was enacted in March 2020 and PE-backed hospitals, physician groups, and other health care companies received more than $3.9 billion in pandemic support. Although DPEGs were able to receive CARES Act provider relief funds and Medicare advance payments, the government structured the Paycheck Protection Program (PPP) so most PE-owned businesses would not qualify. However, at least 8 DPEGs navigated the affiliation rules of the Small Business Administration, and each received $720,805 to $10,000,000 in forgivable PPP loans (Table 4). Even though US Dermatology Partners received a $10 million forgivable Small Business Administration PPP loan in May 2020 after it defaulted on a $377 million dollar loan in January 2020, its BDCs’ debt valuations continue to be discounted. In June 2020, the Department of Justice’s Civil Division noted that PE firms would be held accountable if they knowingly engaged in fraud related to the CARES Act.

After debt has been discounted, it can be retained by the original holder of the debt instrument if they believe the company will continue to make debt payments. Alternatively, the debt instrument holder can work with the company to restructure the terms of the debt agreement, so the company does not default on the debt and, ultimately, file for bankruptcy. The discounted debt may also be sold by the original debt holder to a purchaser who is willing to take on the higher risks associated with discounted debt. Last, if an agreement cannot be worked out between the debt instrument holder and the company, such that the company can continue to make payments, then the company can file for Chapter 7 or 11 bankruptcy. In Chapter 7 bankruptcy, the courts direct the company to liquidate its assets to satisfy debt obligations to the debt instrument holders. In Chapter 11 bankruptcy, the courts and creditors allow the company to continue running operations while the company reorganizes its business. Reorganization may include changing the terms of debt instrument obliga-
Debt valuations of private equity–backed dermatology groups before and during the COVID-19 pandemic

Limitations
This study has some limitations, including that we were able to gather publicly available data on only 9 of the more than 30 DPEGs in existence and these findings may not be generalizable to all DPEGs. Business development corporations are required to create and maintain records on the SEC’s EDGAR database and there could be inaccuracies in the data. Also, BDC managers determine the valuations of debt instruments in their loan portfolios with a degree of subjectivity and may use third-party pricing services or auditing firms; aggressive accounting practices could lead to overly favorable valuations. Additional trends may be discovered with a continued longitudinal evaluation of BDC debt valuations.

Conclusions
Debt valuations of DPEGs decreased prior to the COVID-19 pandemic and contractionary events, such as the pandemic, can place additional financial stress on DPEGs because of the enormous leverage inherent in acquisitions. Debt valuations of some DPEGs suggest a lower probability that their loans will be repaid in full and could be a signal that some are not performing well financially.

Mean PE returns have been trending downward during the past decade. An outperforming market attracts more capital from investors, which drives up valuations for a limited number of acquisition targets. When a PE firm acquires a company at a premium, it will be harder to generate larger profits to service the company’s debt, justify the higher valuation and, ultimately, sell to the next buyer with an acceptable return. Many of the larger and more mature DPEGs have already taken advantage of economies of scale to maximize profits. As DPEGs evolve, servicing large debt loads will become more difficult with decreasing Medicare inflation-adjusted reimbursements. Dermatology PE-backed group strategies to increase revenue and cut costs are limited by corporate practice of medicine laws. Practices may close, or entire DPEGs may go bankrupt, leaving patients without access to dermatologic care. When DPEGs consolidate entire markets, these risks are amplified in addition to antitrust concerns. Further research and more transparency are needed to study debt valuations, including the servicing of debt, and the downstream effects they may have on leveraging and misrepresentation of physician assistants and nurse practitioners, patient care, and physician autonomy.

Physician owners may receive compensation in the form of equity in DPEGs when selling their practices and employed physicians may purchase equity in DPEGs after meeting tenure or productivity thresholds. Physician ownership of equity encourages alignment with DPEGs and offers the potential for future returns; however, in the event of sale or bankruptcy, debt is senior to equity. Equity is the junior-
most level of the capital structure and has the highest risk and highest potential returns. After all debt holders above equity holders have been paid in full, then equity holders can claim assets (Table 1). Accordingly, physicians with equity have the last claim on assets if a company liquidates or reorganizes to service its debt. Equity, which kept physicians aligned with the DPEG, can become worthless overnight. Dermatologists should be aware of the financial health of DPEGs, and the risks involved when considering selling their practice to or working for a DPEG.

**ARTICLE INFORMATION**

**Accepted for Publication:** January 3, 2022.
**Published Online:** March 9, 2022. doi:10.1001/jamadermatol.2022.0009

**Author Contributions:** Mr. R. Memon and Dr Konda had full access to all of the data in the study and take responsibility for the integrity of the data and the accuracy of the data analysis.

**Concept and design:** R. Memon, Konda.

**Acquisition, analysis, or interpretation of data:** All authors.

**Drafting of the manuscript:** All authors.

**Critical revision of the manuscript for important intellectual content:** R. Memon, Francis, Konda. Administrative, technical, or material support: All authors.

**Supervision:** R. Memon, Francis, Konda.

**Conflict of Interest Disclosures:** None reported.

**Additional Contributions:** Xinyang Liu, MS, Department of Biostatistics, University of Florida, provided statistical analysis. He was compensated for his contribution.

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