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BJORKLUND FUND

April 11, 2018

Ellie Mae, Inc. : (ELLI)

Ryan O'Connor

Sector: Information Technology
Industry: Application Software
Current Price: $94.64
Target Price: $113.04

Company Description:

Ellie Mae, Inc. provides software solutions for the residential mortgage industry. Ellie Mae has been innovating the mortgage business since 1997. Although the industry has changed drastically over this time period, the way that lenders achieve compliance, quality, and efficiency has not- and it won't. Ellie Mae's services include Encompass education and certification, professional consulting, implementation, and business writing. Ellie Mae is innovatively redefining the residential mortgage industry by automating everything that is automatable- cutting huge costs for the major lenders, and improving their margins.

BUY

Current Price:	$94.64
Target Price:	$113.04
Market Cap:	3.3B
WACC:	8%
ROC GAAP:	30.9%
Revenue Growth:	8%
52wk High/Low:	$114.95/$79.71
Daily volume:	0.386M
Float:	97.3%
EBITDA Margin:	21.2%
D/E:	No Debt

ELLI:1Y Comp: REM

Thesis:

Ellie Mae has experienced a slight market correction on their current share price. Share prices have come down in the last 18 months from above $100 to hovering around $90. However, Ellie Mae has entrenched themselves in the loan origination market and have delivered value even in industry wide difficulties. In their most recent analyst day they presented a clear path to achieving over $1 billion in revenues by 2022, with a 35-40% EBITDA margin, while pushing topline growth. Their current valuation is relatively cheap, and with the 3 catalysts Ellie Mae is positioned for well over a 20% 1YR Return.

Catalysts:

- **Short Term(within the year):** Value proposition to lenders with the cost savings and speed to close. Short term revenue increase will be mainly due to synergies and additional offerings of Velocify.
- **Mid Term(1-2 years):** Margin expansion from current margins of 26% to 35-40% EBITDA margins- driven by Velocify and better efficiencies in companywide MIS.
- **Long Term(3+):** Uptick in refi activity after the 2019 trough from the recent headwinds in refi volumes.

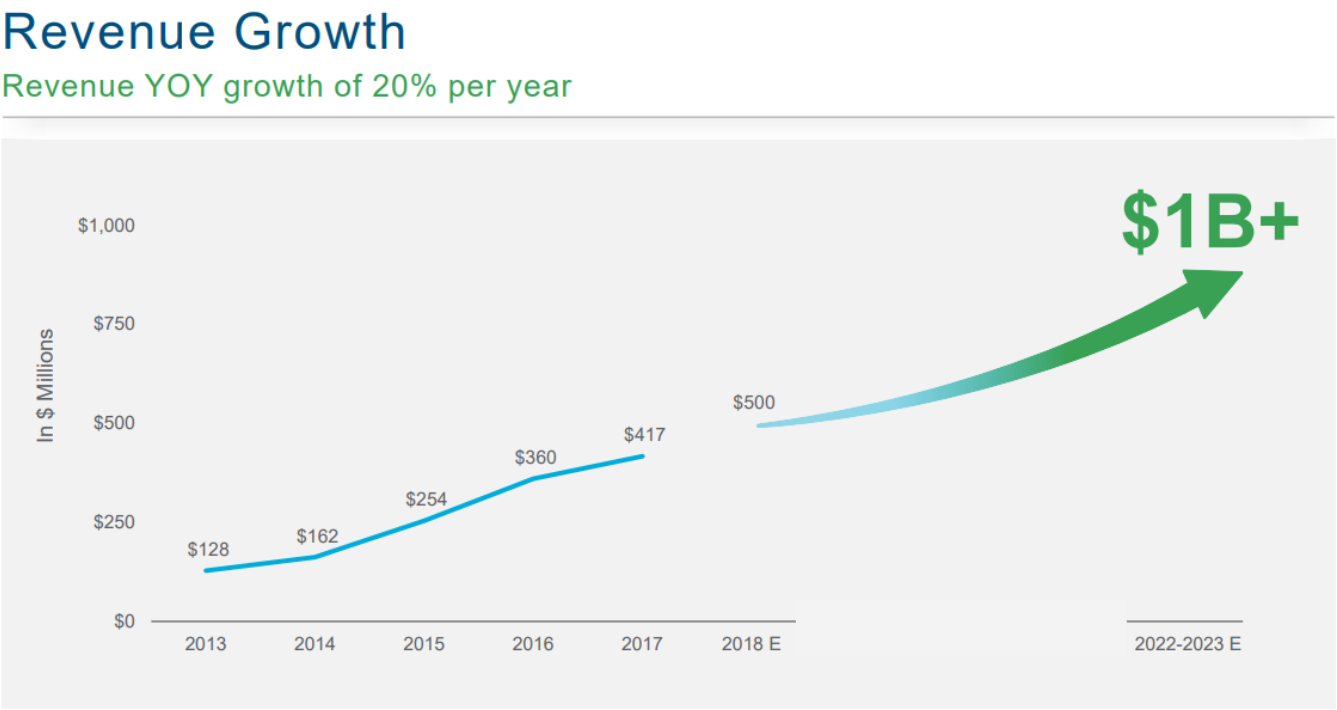
Earnings Performance:

Ellie Mae finished the year strong, securing just about 35% of the market share in the enterprise segment. The CEO Jonathan Corr believes the company is well positioned for stronger growth in 2018.

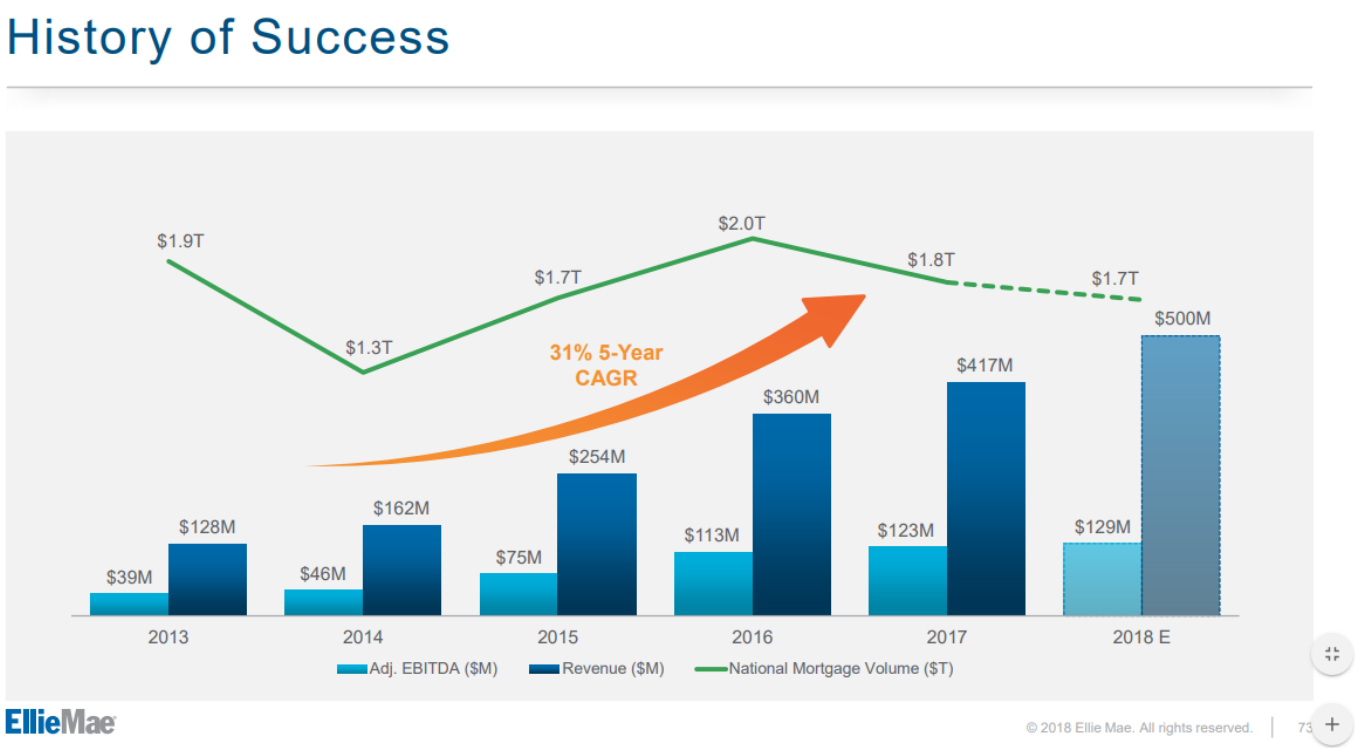
As industry volumes decreased by 19% y/y in Q4 2017, Ellie Mae was still able to achieve a 17% revenue growth. Last quarter, Ellie Mae purchased Velocify for $130 million in cash, which provided solid growth for their core business. Velocify is a software built for mortgage brokers to automate sales operations. This drove Q4 bookings to over 11,000- most coming from mid-sized mortgage lenders with more than 400 employees. For the full year, Ellie Mae drove bookings of 41,000, and finished the year with more than 242,000 contracted users-184,000 (76%) of these users are active. All of these users are seeking a digital mortgage platform for seamless integration of automated steps of the loan origination process. The loan origination process has also become more expensive, from $3,700 in 2009 to $8,000 today. Ellie Mae reduces costs for lenders by enabling faster closing times. Jonathan Corr was very positive in the last earnings call, as Ellie Mae continues to see strong long-term growth opportunities in automating more steps in the mortgage origination process- which will be outlined in the next section.

For the full year of 2017, total revenues grew 16% to $417 million. Non-GAAP adjusted net income decreased 3% to $58.9 million due to the Q4 acquisition of Velocify. Adjusted EBITDA increased 8% to $1,222.6 million, but monthly close loans per active user decreased. This was due to the industry wide declines in refinancing volumes.

The big positive was that contracted revenue, which now includes Velocify, increased 42% y/y and now makes up 73% of the total revenue for Ellie Mae. Revenue per active user was also up in Q4 2017 to $612, which is up 4% y/y. As revenues continue to increase non-GAAP gross margins have remained relatively flat around 64%. However, adjusted EBITDA for the fourth quarter was up, due to the acquisition of Velocify. Ellie Mae has since outlined their roadmap to $1billion+ in annual revenues, and projecting a y/y growth of 20% per year. Ellie Mae's projected revenues for 2018 are $500 million, up fron $417 million.



Now turning to guidance for 2018. Ellie Mae does have a strong history of success. Ellie Mae has begun to disclose more financial reporting data to the public on the fundamentals of their business. This began in January and will continue throughout the year, and the market has reacted positively. There is a seasonality to loan originations. The first quarter is historically the weakest, so they are projecting a 21% decline in volumes- but this is industry wide. This is what makes the stock cheap right now.

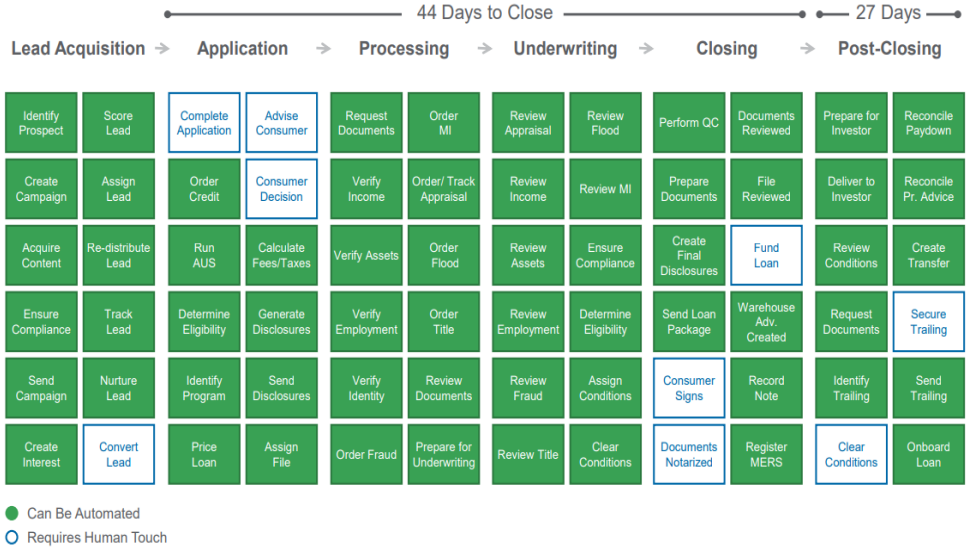


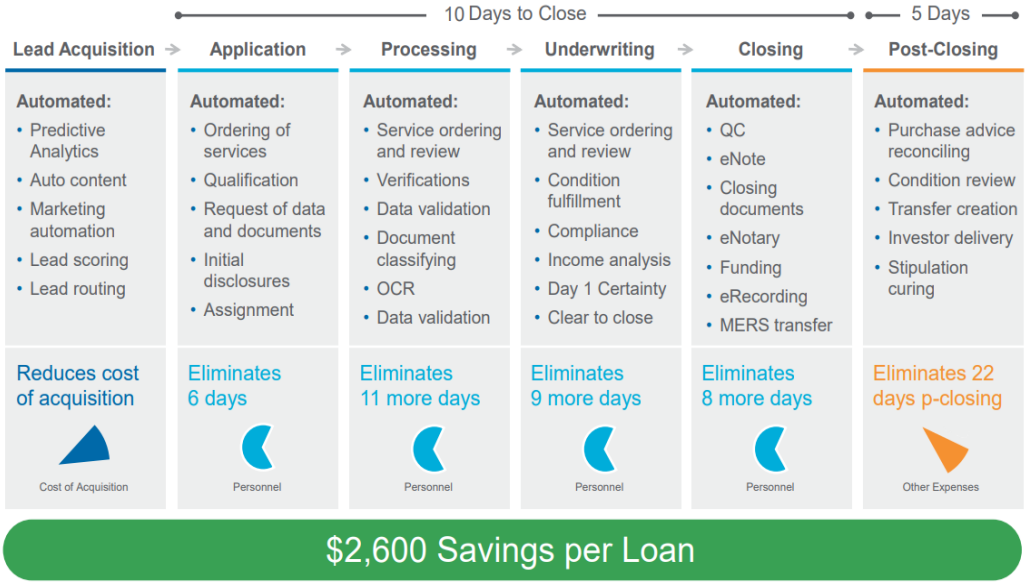
Over the last 5 years they have had a 31% CAGR, and even as the National Mortgage Volume fluctuates, they have continued to grow their revenues. For the full year 2018, revenues will be between $495 and $505 million. Adjusted net income for the year is expected to be between $61 and $65 million. Adjusted EBITDA is expected to be $126-132 million. EBITDA margins will be largely effected by the Velocify acquisition- returning 30% plus adjusted EBITDA margins for the next few years. This will drive growth and create value for Ellie Mae.

Improving Productivity:

Below are a slides from the analyst day presentation that took place on March 20, 2018- after their most recent earnings call. The first chart shows the 6 steps to the loan origination process for a lender. Each step is broken into its component parts symbolized by boxes, the green box means that this process can be automated and the white box means that it requires human interaction/touch. Out of 72 individual processes in the 71 day process, only 9 processes require a human touch.

The chart below this shows the same steps and the days/ costs that the entire process can be reduced by using the Ellie Mae platform. The automation provided by Ellie Mae eliminates 56 days of the 71 and brings a total cost savings of $2,600 to the lenders using the systems.





The total loan production expenses have reached an all-time high, as mentioned in the earnings performance. In 2017 this total cost is over $8,000. Out of this cost, 66% ($5,279) is attributed to the personnel costs, which can be cut out by Ellie Mae. The personnel costs are so high due to the lack of efficiency which is shown to also increase with the Ellie Mae platform.

Below are the earnings consensus overview as well as the earnings trends. Ellie Mae last Q4 2017 had an earnings surprise in all measures. Notably Adjusted Net Income of almost 30% and EBITDA of almost 15%. Historical seasonality does come into play with mortgage volume, and originations.

4) Consensus Overview | EEO »

Measure	Actual	Estimate	Surprise	Comps Scorecard (20 of 20)	Past Surprise
		21) Current Period Overview (Q1/18)		22) Prior Period Analysis (Q4/17)	
11) EPS, Adj+	0.330	0.253	30.69%	Beat:16 Met:0 Missed:3	Beat 7 of 8
12) EPS, GAAP	0.280	0.016	1681.82%	Beat:13 Met:1 Missed:5	Beat 8 of 8
13) Revenue	112.886M	108.250M	4.28%	Beat:13 Met:0 Missed:6	Beat 6 of 8
14) Net Income, Adj+	11.772M	9.083M	29.60%	Beat:16 Met:0 Missed:3	Beat 7 of 8
15) Operating Profit	--	12.600M	--	--	--
16) EBITDA	28.511M	24.864M	14.67%	Beat:3 Met:0 Missed:0	Beat 7 of 8

The current period overview is a little weaker- measures are a bit down, but the revenues are still positive with a y/y growth of 16.8%.

Competitor Analysis:

Ellie Mae operates with a cloud based technology, which has become increasingly popular over the last few years in all segments of technology. Their major competitors are Black Knight Financial Services, Calyx Ventures, and Conduent Incorporated. All three companies operate in the same space, by offering cloud based technology to increase efficiencies in either business or government. Below is customer review from a data specialist, reviewing the Ellie Mae Encompass platform. The consensus of the reviews are glowing, although there are some cons surrounding the speed of the technology- Ellie Mae has made this very clear in their last earnings call that they will continue to improve their MIS systems and the technology.

'Outstanding product' Jun 07, 2017

Jenn Alonzo
Data Specialist
Nhs of LA County
Used the software for: 2+ years
Source: Capterra

5/5 ★★★★★ Overall

★★★★★ 5/5 Ease of Use

★★★★★ 5/5 Features & Functionality

★★★★★ 5/5 Customer Support

Likelihood to Recommend: Not Likely – Extremely Likely

Pros: This software is really easy to use and has never given me any issues. I will continue to use this software.

Below is a snapshot of the relative valuation with their main competitors and other companies within the same space. Ellie Mae has a strong revenue growth, well above their 3 main competitors. Their net income growth is nearly 40% over the past year and they have a high ROIC in comparison to the industry. The two concerning numbers are their FCF Growth and P/E ratio. The high P/E ratio represents the positive market sentiment around Ellie Mae. Even Black Knight, who has better EBITDA margins, said that Ellie Mae has the best platform in the entire space for loan originations.

	Name	Mkt Cap↓ (USD)	Rev - 1 Yr Gr:Y	NI / Profit - 1 Yr Gr:Y	ROIC:Y	T12M EBITDA Mrgn:Y	FCF 1Yr Gr	P/E	ROE
	Median	4.02B	2.50%	2.31%	1.60%	11.16%	23.07	73.54	0.43%
100)	ELLIE MAE INC	2.99B	15.75%	39.90%	4.04%	21.44%	-46.11	106.61	4.19%
101)	AUTODESK INC	28.26B	1.26%	2.61%	-26.19%	-14.66%	--	--	--
102)	RED HAT INC	27.73B	21.09%	2.01%	18.25%	19.57%	17.29	73.54	28.58%
103)	WORKDAY INC-CLASS A	26.51B	36.12%	16.50%	-12.83%	-5.07%	41.07	--	-22.49%
104)	BLACK KNIGHT INC	7.16B	2.50%	298.03%	8.70%	44.60%	12.55	60.16	--
105)	CONDUENT INC	4.02B	-6.02%	--	1.60%	11.16%	--	333.39	0.43%
106)	ACI WORLDWIDE INC	2.81B	1.84%	-96.04%	7.84%	24.48%	104.14	36.78	10.28%
107)	3D SYSTEMS CORP	1.36B	2.07%	-72.29%	-9.13%	1.23%	--	--	-10.23%
108)	CALYX VENTURES INC	5.79M	114.02%	-358.58%	-142.63%	-527.84%	28.86	--	-234.52%

Ownership/Short Interest:

Ellie Mae has a float of over 97%. About ¾ of this is held by Investment Advisors, and 15.89% is held by Hedge Fund Managers. In their most recent share price dip, both Hedge Fund Managers and Investment Advisors increased their positions. Interestingly, if you look back to October of 2017, Ellie Mae was trading at nearly $90 a share- which is right where they are now. Hedge Fund Managers increased their

position by 4.53%. Once again, due to macroeconomic factors, the price has dipped again- but due to the catalysts they have outlined in their earnings calls, they will continue to create value.

Compare Current Stats Against 04/01/18

Top Ownership Type (%)

51) Ownership Type	04/01/18	Curr	Change
11) Investment Advisor	76.16	76.24	+0.08
12) Hedge Fund Manager	15.86	15.89	+0.03
13) Pension Fund	2.54	2.55	+0.01
14) Individual	1.93	1.91	-0.02
15) Insurance Company	1.33	1.23	-0.10
16) Sovereign Wealth Fund	1.08	1.08	0.00
17) Bank	0.83	0.83	0.00
18) Government	0.17	0.17	0.00
19) Brokerage	0.05	0.05	0.00

Compare Current Stats Against 10/01/17

Top Ownership Type (%)

51) Ownership Type	10/01/17	Curr	Change
11) Investment Advisor	79.78	76.24	-3.54
12) Hedge Fund Manager	11.36	15.89	+4.53
13) Pension Fund	2.97	2.55	-0.42
14) Individual	2.59	1.91	-0.68
15) Insurance Company	0.46	1.23	+0.77
16) Sovereign Wealth Fund	1.24	1.08	-0.16
17) Bank	1.15	0.83	-0.32
18) Government	0.21	0.17	-0.04
19) Brokerage	0.20	0.05	-0.15

Conclusion:

Ellie Mae has experienced some trouble lately, but this is what has left the market to undervalue their stock price. Trading at under $90 a share, they are at a position of strength within the market. The Federal Reserve has already raised interest rates this year, and they are planning to raise them again. Coupled with the tax deduction changes, there is a strong chance that the housing market takes a hit. Historically the first quarter is weak for Ellie Mae, but this market cynicism has been around them for the past 10 months and they have continued to perform very strongly. Ellie Mae will continue to drive top line growth, and expand their margins even in these tough times. As valuations have come down due to macroeconomic factors, it has expanded the room for upside in a fundamentally strong company.

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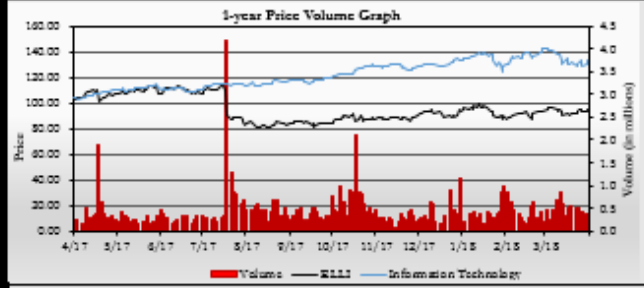
Ellie Mae, Inc. (ELLI) — CENTER FOR GLOBAL FINANCIAL STUDIES — NEUTRAL

Analysis by Al Capone
4/13/2018

Current Price:	$94.64	Intrinsic Value	$103.57
Divident Yield:	0.0%	Target Price	$110.02

Target 1 year Return: 16.25%
Probability of Price Increase: 100



Description

Ellie Mae, Inc. provider cloud-based platform for the mortgage finance industry in the United States.

General Information

Sector	Information Technology
Industry	Software
Last Guidance	February 12, 2018
Next earning date	April 27, 2018

Market Assumptions

Estimated Equity Risk Premium	5.08%
Effective Tax rate	21%

Market Data

Market Capitalization	$3,256.67
Daily volume (mil)	0.13
Shares outstanding (mil)	34.31
Diluted shares outstanding (mil)	35.81
% shares held by institutions	109%
% shares held by investment Managers	89%
% shares held by hedge funds	21%
% shares held by insiders	2.10%
Short interest	11.75%
Days to cover short interest	10.04
52 week high	$114.95
52-week low	$79.71
Volatility	36.59%

Past Earning Surprises

Quarter ending	Revenue	EBITDA
12/31/2016	7.93%	-21.31%
3/31/2017	0.10%	-23.48%
6/30/2017	-5.97%	-23.76%
9/30/2017	1.55%	-6.52%
12/31/2017	4.33%	-16.16%
Mean	**1.59%**	**-18.25%**
Standard error	1.0%	4.0%

Market and Credit Scores

Recommendation (STARS) Value--0
Recommendation (STARS) Description--0
Quality Ranking Value--0
Quality Ranking Description--0
Short Score--3
Market Signal Probability of Default % (Non-Rating)--0.017%
CreditModel Score (Non-Rating)--bb-

Industry and Segment Information

LTM Revenues by Geographic Segme	LTM Revenues by Business Segments
United States--100%	Mortgage-Related Software and Services--100%
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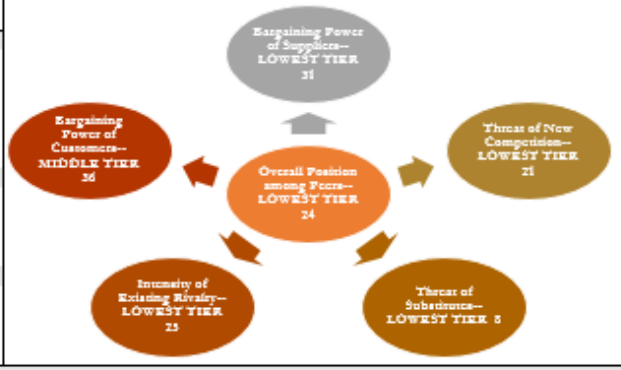
Peers

Ebix, Inc.	HubSpot, Inc.
RealPage, Inc.	Paycom Software, Inc.
Silver Spring Networks, Inc.	EnerNOC, Inc.
Guidewire Software, Inc.	Callidus Software Inc.
Zendesk, Inc.	Shenzhen Tianyuan DIC Information Technology C

Management	Position	Total Compensation Growth	Stock Price Growth During Tenure
Anderman, Sigmund	Executive Chairman	4.5% per annum over 6y	30.9% per annum over 6y
Carr, Jonathan	Chief Executive Officer, President and Directo	28.43% per annum over 6y	30.9% per annum over 6y
LaVay, Matthew	Executive VP & CFO		
Hirsch, Peter	Executive Vice President of Technology & Oper	2.66% per annum over 2y	21.83% per annum over 2y
Schreiner Gater, Cathleen	Executive Vice President of Sales & Marketing	5.74% per annum over 2y	21.83% per annum over 2y
Tyrrell, Joseph	Executive Vice President of Corporate Strateg	5.14% per annum over 2y	21.83% per annum over 2y

Profitability	ELLI (LTM)	ELLI Historical	Peers' Median (LTM)
Return on Capital (GAAP)	30.9%	17.06%	17.91%
Operating Margin	31%	21.20%	15.94%
Revenue/Capital (GAAP)	1.00	0.80	1.12
ROE (GAAP)	8.5%	7.8%	21.5%
Net margin	15.1%	11.5%	12.9%
Revenue/Book Value (GAAP)	0.56	0.67	1.66
Invested Funds	**ELLI (LTM)**	**ELLI Historical**	**Peers' Median (LTM)**
Cash/Capital	20.6%	31.0%	31.0%
NWC/Capital	-1.9%	4.7%	-11.2%
Operating Assets/Capital	64.7%	45.9%	55.5%
Goodwill/Capital	16.6%	18.4%	24.7%
Capital Structure	**ELLI (LTM)**	**ELLI Historical**	**Peers' Median (LTM)**
Total Debt/Market Capitalization	0.04	0.03	0.29
Cost of Debt	3.9%	3.9%	4.2%
CGFS Rating (F-score, Z-score, and default Probability		A	
WACC	8.8%	8.9%	8.8%

Porter's 5 forces (Scores are percentiles)



Valuation

Forecast Assumptions	Explicit Period (10 years)	Continuing Period
Revenue Growth CAGR	8%	2%
Average Operating Margin	32%	34%
Average Net Margin	29%	31%
Growth in Capital CAGR	10%	2%
Growth in Claims CAGR	6%	2%
Average Return on Capital	11%	9%
Average Return on Equity	11%	9%
Average Cost of Capital	8%	8%
Average Cost of Equity Ke	8%	8%