Nuance Communications (NASDAQ: NUAN): Long

2020/5/2 — *SaaS transition and Leadership Change: 70% upside* — James Shen

(USD in $, except for per share data)

Share Price (as of 12.6.2019)	$19.04
FD Shares Outstanding	282
Market Capitalization	**$5,375**
Less: Cash	(503)
Plus: Debt	1,787
Enterprise Value	**$6,659**
52 Week Range	$13.51-$23.58
% of 52-Week High	80.7%
Avg Daily Value Traded (Last 3 months)	$80.9
as a % of Market Cap	1.5%

	Actual FYE August 31,			Projected Fiscal Years Ending August 31,				
	2017A	2018A	2019A	2020E	2021E	2022E	2023E	2024E
Total Revenue	$1,939	$2,052	$1,859	$1,549	$1,644	$1,791	$1,911	$2,035
y / y growth		*5.8%*	*(9.4%)*	*(16.7%)*	*6.1%*	*9.0%*	*6.7%*	*6.5%*
Adjusted EBITDA	$502	$509	$546	$460	$528	$619	$715	$795
Margin	*25.9%*	*24.8%*	*29.4%*	*29.7%*	*32.1%*	*34.6%*	*37.4%*	*39.0%*
y / y growth		*1.4%*	*7.3%*	*(15.7%)*	*14.7%*	*17.3%*	*15.5%*	*11.1%*
Adjusted Net Income	*$309*	*$295*	*$359*	*$268*	*$322*	*$394*	*$469*	*$532*
y / y growth		(4.5%)	21.7%	(25.3%)	20.2%	22.4%	18.9%	13.5%
Adjusted EPS - JS	*$1.05*	*$1.19*	*$1.14*	*$0.95*	*$1.17*	*$1.47*	*$1.81*	*$2.13*
y / y growth		13.3%	(4.2%)	*(16.8%)*	*22.9%*	*26.6%*	*23.1%*	*17.6%*
Consensus EPS				$0.82	$0.90	$1.00		
Variance to Consensus				***15.7%***	***29.5%***	***47.5%***		
FCF / Share	*$1.01*	*$1.39*	*$1.44*	$1.23	$1.44	$1.76	$2.12	$2.49
y / y growth		*38.0%*	*3.7%*	*(14.5%)*	*16.7%*	*22.1%*	*20.7%*	*17.2%*
FCF % of NI	*96.0%*	*116.9%*	*126.5%*	*130.1%*	*123.6%*	*119.3%*	*116.9%*	*116.5%*
EV / EBITDA	13.3x	13.1x	12.2x	14.5x	12.6x	10.8x	9.3x	8.4x
P / E - JS - Base Case				20.1x	16.3x	12.9x	10.5x	8.9x
P / E Consensus				23.2x	21.2x	19.0x		
FCF Yield	5.3%	7.3%	*7.6%*	6.5%	7.6%	9.2%	11.1%	13.1%
ROIC	0.9%	(1.6%)	4.8%	2.8%	5.7%	8.9%	12.0%	14.9%

Investment Thesis

Nuance Communications is the **market leader** in healthcare focused speech recognition software industry with **60%+ market share**. They have a strong and defensible moat in their nature language processing ability due to more than 30 years of research in medical language library and their scale. Nuance recently is going through a few strategy and organization changes, including 1) a license-to-**SaaS transition**; 2) a **new CEO** that is shareholder friendly and deeply incentivized; and 3) business **portfolio optimization** initiatives that introduce more transparency into the company. The Street does not appreciate a) the revenue and margin opportunity from the license-to-saas transition and b) Nuance's cash flow generation ability and opportunities for additional share buyback. My analysis shows the business can earn an EPS of $1.47 in 2022 (vs. Street of $1.00). Nuance historically has traded around 15x FWD P/E; however, a 22x fwd 2022 P/E multiple is appropriate, implying a $32 share price, or **70% upside / 19% IRR**

Business Description

Nuance is a U.S-based multinational computer software technology corporation that provides speech recognition and artificial intelligence software. Nuance's products offer customers high accuracy in automated speech recognition, natural language understanding capabilities, dialog and information management capabilities.

Nuance's business segments include

1. **Healthcare**, which provides clinical speech and language understanding solutions that improve the clinical documentation process
2. **Enterprise**, which engages speech recognition and artificial intelligence to provide automated customer solutions and services for voice, mobile, Web, and messaging channels

Nuance's Business Mix

Excluding the spun-off automotive segment, healthcare accounts for 66% of 2019 revenue and enterprise is 34%. Under healthcare, there are four sub segments

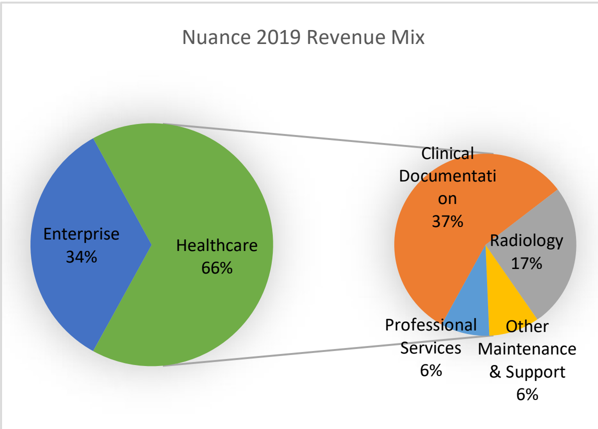
1 Clinical documentation, which includes

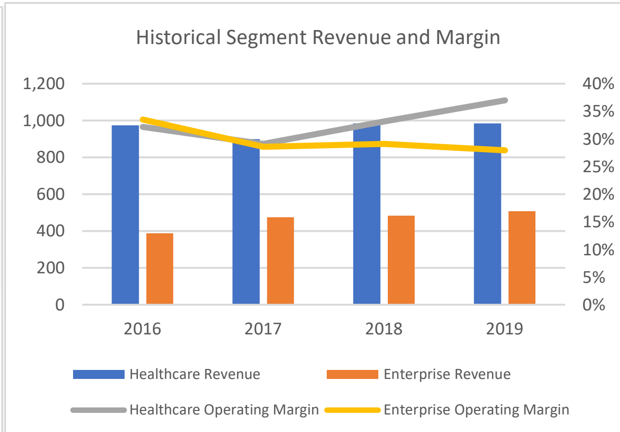
- Dragon Medical Cloud, a recently launched <u>cloud-based</u> speech recognition software that helps doctors with medical documentation
- Dragon Medical license, which is the older <u>license-based</u> version of Dragon Medical Cloud

- ○ Legacy transcription services (HIM), which is an outsourcing service where physicians voice record medical reports and Nuance employs transcriptionists to transcribe the reports

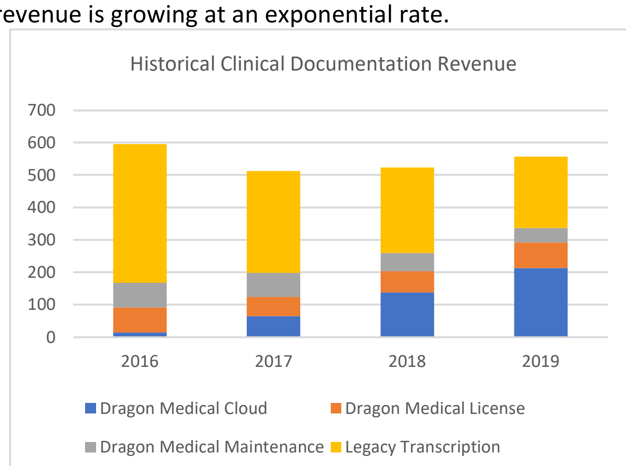
2 Radiology. Similar to clinical documentation, in medical imaging and diagnostics, radiologists also rely on Nuance's software (PowerScribe) to transcribe their analysis for doctors to apply the right treatment.

3/4 Professional services and other: transcription and dictation services for non-hospital customers.





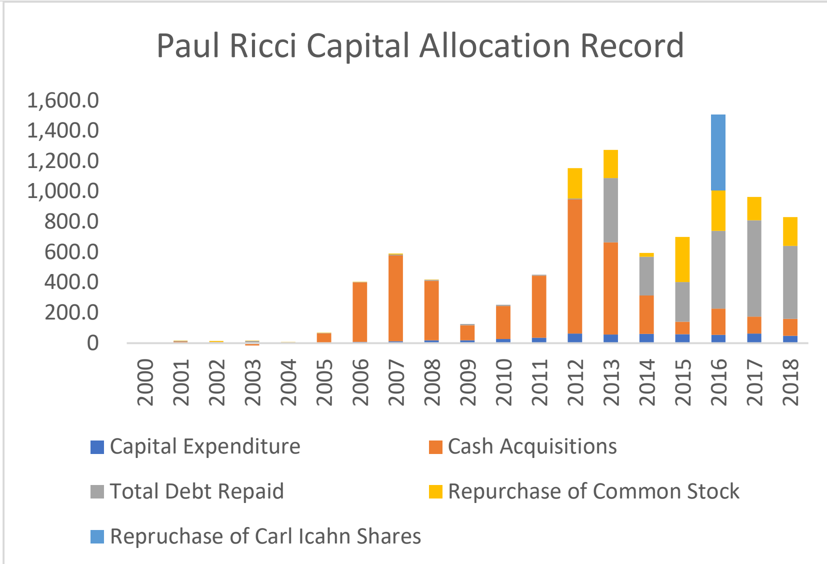
The key segment in healthcare is clinical documentation. Nuance is introducing their Dragon cloud solution to clients who've used to use the legacy transcription services as well as the license based Dragon software. As a result, the legacy transcription services' revenue is running down and cloud revenue is growing at an exponential rate.

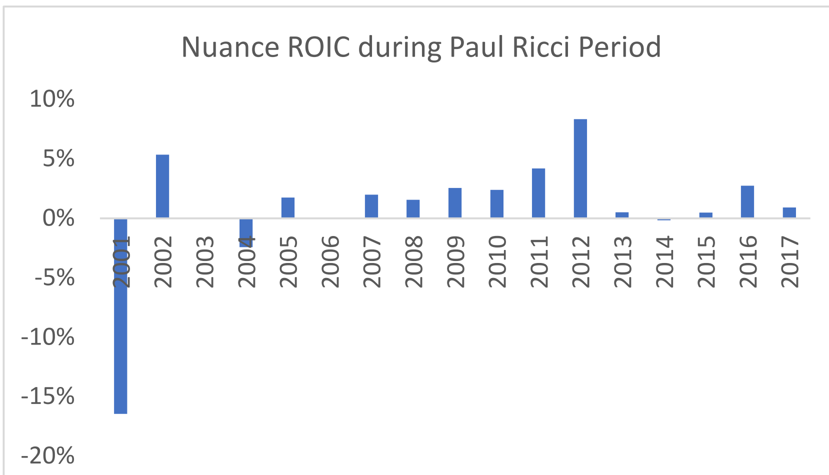


Management Context

Old CEO: Paul Ricci

- Ricci served as the CEO of Nuance since 2000 and retired in Feb 2018.
- Prior to Nuance, he was VP of business development at Xerox
- Ricci grew Nuance from a $50mm revenue company in 2000 to the $1.8bn revenue company in 2018. He grew the company through both organic growth as well as numerous acquisitions ($5bn+ over the last 20 years).
- Although the topline growth for Nuance was impressive over the past two decades, it appears that Ricci never seem to put much focus on capital allocation and enhancing shareholder values. The ROIC for the past two decades has been mostly **negative or low single digit**. Similarly, the company's EPS had been negative in most of the years.
- Ricci's capital allocation strategy has been mostly M&A, followed by deleverage.
- VAR reviewed Ricci as someone who's "**tough character**", "reclusive" and "not connected to employees".





New CEO: Mark Benjamin

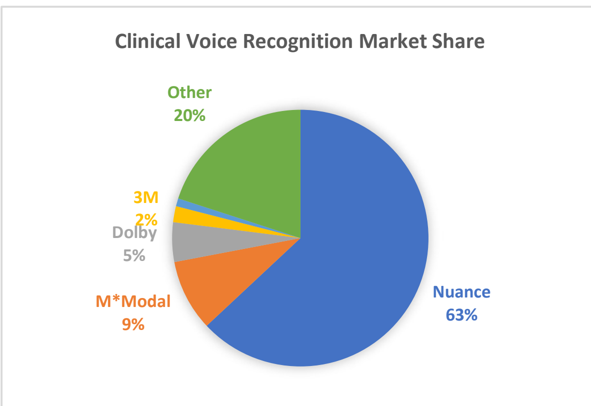
- Benjamin joined Nuance in April 2018 as the CEO. Prior to that, he was president and COO at NCR Corporation between 2016-2018.
- Before that, Benjamin spent 24 years at ADP, assuming various roles, including president of global enterprise solution (2013-2016) and president of Employer Services International (2011-2013)
- ADP track record: Due to the fact that Benjamin's division is not broken down as a reporting segment by ADP until 2019, it is difficult to quantify his track record. Some qualitative description of his achievement includes managing a billion-dollar business portfolio and 20k+ employees in his division.
- NCR track record: Benjamin oversaw sales, business and product development, and supply chain operations. Despite the fact that NCR faced challenges in sales growth, the company's gross margin and EBITDA margin improved by 100bps during 2016-2017 when Benjamin was there.
- Benjamin also handled most of investors and analyst's interaction on behalf of NCR's CEO Bill Nuti
- Since joining Nuance, Benjamin was heavily involved in reviewing the business' portfolio and the decision and execution of spinning off the Automotive division and the Imaging division. More details of his achievement at Nuance is discussed in the main thesis.

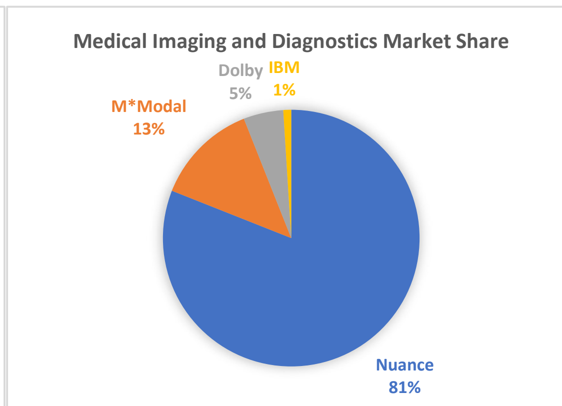
Variant View

- Nuance is relatively **thinly covered** by a few brokers. Analysts are mostly modelling revenue and margin based on the company's reporting segments instead of business segments, and extrapolating margin expansion, which cause them to overlook impact of the many changes that the company is going through right now.
  - Recent spinoff and sale of imaging business has also made the company's financials hard to decipher
  - With my own analysis and VAR calls, I built a more detailed model that links product level economics with the company's revenue and margin. My analysis shows that the company has a **higher upside in margin expansion** when compared to the street.
- New CEO Mark Benjamin is still earning credit from the investors. However, I believe this new CEO **can outperform his expectations** based on VAR calls, his redesigned incentive package, and the fact that he has achieved all goals he's stated since joining the company in 2018
- Nuance has a strong moat and **many greenfield opportunities** to further lift their profitability. These opportunities are not given enough credit for as of now. Studying some of the startups allowed me to gain more insight on the potential upside of these initiatives.

Key Thesis Points

1. **Nuance is the industry leader in speech recognition software in clinical documentation, which has a large and growing global TAM. Nuance has a defensible moat vis-à-vis its competitors due to its healthcare focus and AI capabilities.**
   - Nuance's speech recognition software dominates their respective market. Its Dragon Medical products are used by **60%+ of the hospitals and clinics** and the PowerScribe products are used by **80%+ radiologists**. Nuance's products are rated highest by industry surveys on customer satisfaction and loyalty.

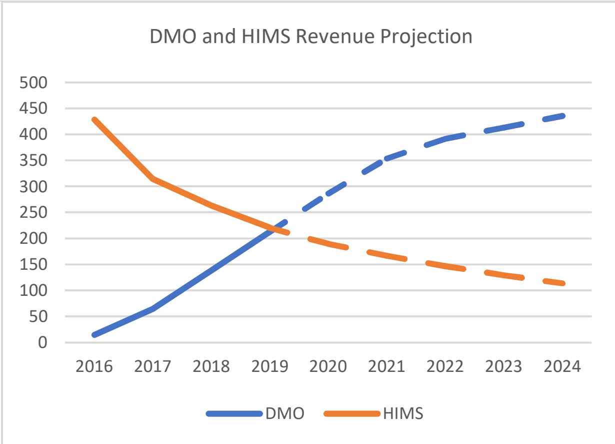


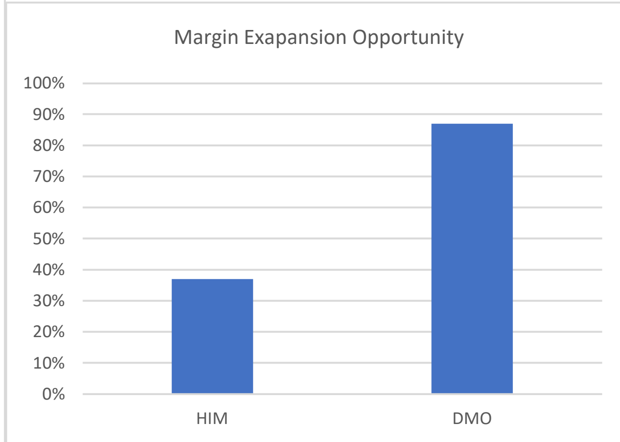


   - Nuance has built **96 medical dictionaries** over the **past 30 years** to help its speech recognition AI to achieve **99% accuracy**.
   - VAR reveals that "Nuance's technology is the best in class. The speech recognition accuracy is close to 100% and all doctors find it incredible. **Customers are very sticky**."

2. **The company is currently going through three large changes; a cloud transition of its core healthcare speech recognition business, business portfolio optimization and a new CEO. I believe combined effect of these changes are under appreciated by the street**

   2.1 Nuance's Clinical Documentation segment is going through two changes. Clients from both the legacy transcription business and the license-based Dragon software business are getting onboarded to the **cloud-based Dragon solution**. The transition will provide a significant lift to the segment's margin and revenue.
   - The transition from legacy transcription services (HIM) to cloud-based speech recognition Dragon Medical One (DMO) will **lift margin by 2-3x**.
     - HIM is a labor-intensive service model that generates **mid 30% margin** vs DMO is a SaaS solution that can have an 80% margin.
     - While HIMs declines at an annual rate of 10-12%, clients' transition onto DMO will offset the topline impact.





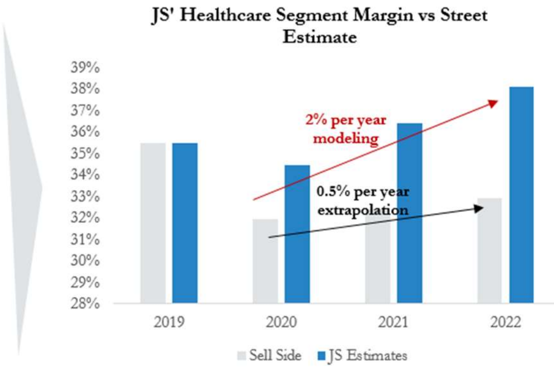
- The transition from on-premise license-based model to subscription-based model will further provide a **2-3x upside** to the revenue.
  - Based on primary research, Nuance's old license software costs $1500 per copy whereas the new subscription model charges $100 per month. Annualized revenue for the cloud solution is 2x of the license solution
  - ARPU over the transition period appears to be much lower than the retail price due to Nuance's initial **concession in price**. This implies **30-40%+ upside for ARPU** once Nuance passes the transition phase

Dragon Medical License Cost	$1,500
Software Replacement Cycle	3 years
Annualized Revenue to NUAN+20% maintenance	$600
Dragon Medical Cloud Subscription Cost (monthly)	$100
Dragon Medical Cloud Subscription Cost (annually)	$1200
Cloud to License Upside	2x

	2018	**2019**
Dragon Cloud Annual Recurring Revenue ($MM)	186	257
US Physician Base	925,000	925,000
DMO Penetration	33%	40%
# of Subscriptions	305,250	370,000
Implied Monthly ARPU	51	58
DMO Retail Price	100	100
Discount to Retail	49%	42%

- Post transition healthcare segment should be a high cash generation business, with $1.1bn revenue, 90% recurring business, and 45%+ operating margin. Whereas most of the street models do not break down margins at the product level and understate the upside potentials
  - Street's forecast simply extrapolates forward margin and has healthcare segment margin stepping up by 0.5% annually. The margin expansion opportunity should be much bigger when using a product level margin estimate

	Margin Estimate	Current Weight	CAGR(next 3Y)
Dragon Medical & Radiology & Maintenance	mid 80%	69%	20%+
HIM	mid 30%	22%	-13%
Other	mid 30%	9%	-15%

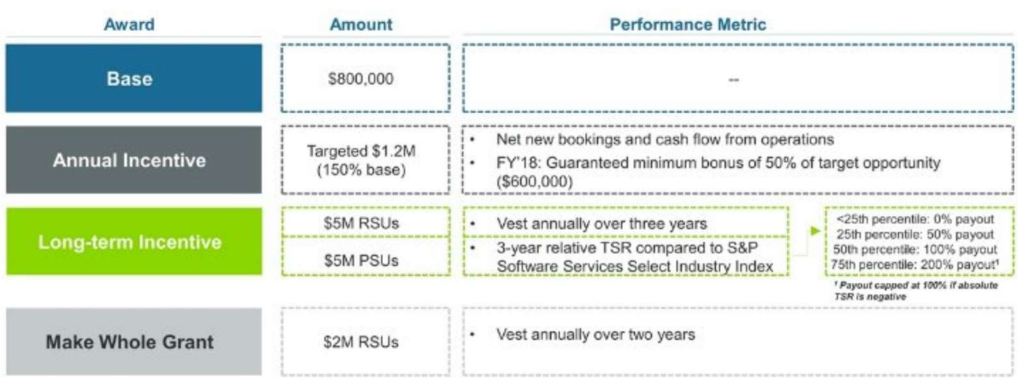


2.2 The new CEO Mark Benjamin brings relevant experience of building cloud-based solutions and enhancing value for shareholders. Benjamin is **deeply incentivized**, and based on stated goals and track record, consensus EPS expectations of $1.02 by 2022 and $100mm annual share repurchase appear conservative.

- At both ADP and NCR, Benjamin was responsible for business transformation and building out cloud solutions.
- Benjamin is shareholder friendly based on his track record and initiatives since arriving at Nuance.
  - At NCR, He handled most of the investor engagement as the COO on **behalf of the CEO.**
  - Since joining Nuance, his initiatives to optimize Nuance's portfolio has introduced great transparency for the investors. He's also been very active in communications with investors compared to the old CEO Paul Ricci.

Date	New CEO's Investor Engagements and Initiatives
Mar-18	Former CEO Paul Ricci announced retirement
Apr-18	New CEO Mark Benjamin joined Nuance
Nov-18	Announce spinoff of auto division
Nov-18	Announce sale of imaging business
Nov-18	Announce wind-down of mobile division
Feb-19	Completed sale of imaging division
Oct-19	Completed spin-off of auto division
Since Jun 2018	Presented in **5 sell side conferences**; Ricci did **2 in last 5 years**
Dec-19	First investor day **since 2012**

- Benjamin is deeply incentivized to deliver long term stock performance. He received a **10 to 1 stock to cash ratio** for his 2018 compensation. Additionally, his performance bonus is tied to a **3-year total share performance** against the S&P software index.



Award	Amount	Performance Metric
Base	$800,000	--
Annual Incentive	Targeted $1.2M (150% base)	• Net new bookings and cash flow from operations • FY'18: Guaranteed minimum bonus of 50% of target opportunity ($600,000)
Long-term Incentive	$5M RSUs $5M PSUs	• Vest annually over three years • 3-year relative TSR compared to S&P Software Services Select Industry Index → <25th percentile: 0% payout; 25th percentile: 50% payout; 50th percentile: 100% payout; 75th percentile: 200% payout[1] [1] Payout capped at 100% if absolute TSR is negative
Make Whole Grant	$2M RSUs	• Vest annually over two years

2.3 Recent spin off of the automotive and sale of imaging segment have introduced transparency to the remain co, allowed the remain co to de-lever, and creates opportunities for more future buy back and strategic M&As.

- Although management has only formally communicated $50mm of buyback, I believe the company has the capability of buying back $150mm+ of their stock annually, or 3% of the market cap going forward with their free cash flow generation abilities.
  - NUAN will generate **$400mm+ recurring free cash flow** going forward and the management guided a **~$800mm+ cash & marketable** securities on balance sheet by end of FY 2020. This leaves many rooms for increasing share buyback activities even after M&A.
  - NUAN has $430mm available from their share repurchase program and CEO mentioned that share repurchase will be priority in capital allocation going forward.

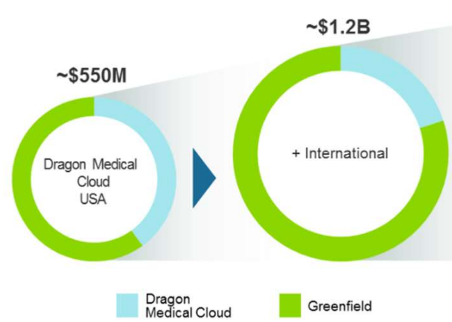
3. **Several new initiatives that the company is undertaking provides further option values to the investment**
   - Recently announced partnership with MSFT on ACI (ambient clinical intelligence) initiative can deliver both margin and topline growth when benchmarked to private peers. Startup company Suki piloted this idea and charges **4x** than Nuance's Dragon software.
     - Based on VAR, MSFT is among the best cloud partners in healthcare compared to GOOG or AMZN, largely because most the EHR(electronic health record) systems use MSFT servers.
     - Conservative assumptions on ACI penetration leads to $1-$3 additional value to current stock price, which is **10-20% upside**.

	Low Case	**High Case**
Suki Price ($)	500	500
Dragon Price ($)	100	100
Incremental Annual ARPU ($)	4,800	4,800
Physician Base	550,000	550,000
Physician Penetration	2%	5%
# of ACI subscriptions	11,000	27,500
Incremental Revenue ($MM)	53	132
Operating Margin	50%	50%
Operating Income ($MM)	26	66
NOPAT($MM)	21	51
Multiple	18x	18x
Incremental EV ($MM)	371	927
Incremental Share Price ($)	**1.35**	**3.38**

   - International markets represent future growth opportunities, given the fact that NUAN's NLP AI is able to process 60+ languages in clinical settings.
     - Compared to US where EHR has achieved high penetration, Europe and Asia represent green field opportunities as EHR is still being implemented.
     - Nuance has international customers that are still using license-based Dragon Medical software.

	Estimated Number of Physicians (in thousands)
UK	188
Germany	392
France	200
Australia	70
Nordics	100
Total Strategic Europe	**950**
US	**1,000**

Management Estimate of Healthcare TAM



4. **Company multiples can expand for a few reasons. NUAN is under followed and covered by only a few brokers. The company was often looked using a revenue multiple previously due to lack of clarity in their business model. Recent**

portfolio optimization and SaaS transition should simplify the business mix and attract more investors' attention in the future.

- Although the spinoff of auto segment and sale of imaging business have introduced clarity into the business, clean financials will be published first time in Q1 2020. Noises related restructuring still make it hard for investors to the underwrite a multiple for the company right now.
- NUAN's forward 2022 P/E at 18x. Software companies that went through successful SaaS transition trade at average 28x.
  - I would take a 20%-25% haircut from peer average P/E to reflect the fact that 30% of Nuance is in enterprise segment where growth picture is less clear and margin expansion room is relatively small. EPS growth of 16% is 20% lower than peer's average of 20%.
  - This should be partially offset by the fact that the new CEO will continue to focus on enhancing shareholder value and deliver strong TSR
  - As a result, I decided to use a 22x 2020 P/E for my base case

	Revenue Growth (Next 3Y)	FCF Growth (Next 3Y)	EPS Growth (Next 3Y)	2022 P/E Multiple
Cadence Design Systems (CDNS)	8%	19%	10%	27x
PTC Inc. (PTC)	13%	28%	33%	19x
Adobe Inc. (ADBE)	19%	18%	19%	27x
Autodesk, Inc. (ADSK)	23%	25%	32%	30x
salesforce.com, inc. (CRM)	17%	22%	14%	40x
Automatic Data Processing (ADP)	6%	23%	12%	22x
Average	**15%**	**22%**	**20%**	**27.5x**
Nuance	**5%**	**12%**	**16%**	**19x**

- The cleaner remain co now can be a target for strategic buyers or PE sponsors.
  - 3M bought Nuance's healthcare competitor M*Modal in 2019 for **5x revenue** multiple, which is a 20% premium to Nuance's forward 4.1x TEV/Rev valuation for a much smaller scale business

Key Risks and Mitigants

- More startup companies entering the clinical documentation software market
  - Mitigant: Hospitals are slow moving organizations when it comes to new technology and Nuance is continuing to roll out new technology to keep up with the competition
- Threat from platforms such as Google and Amazon
  - Mitigant: Google and Amazon are not direct competitors to Nuance in the B2B market. Nuance has partnered with Microsoft in the cloud space
- Hospitals cut IT spending on documentation software
  - Mitigant: Documentation services are essential to physician's day to day job and physician burn out rate is rising. Documentation services account for only 1% of hospitals total IT spending
- Covid-19 impact: cloud transition timeline for hospitals may be temporarily pushed out due to Covid-19. However, Nuance will still be the long-term beneficiary of this, as Dragon Medical is a mission-critical software for physicians and the cloud based DMO can allow physicians to more flexibly handle the transcription part of their job.

Appendix - Valuation

As previously discussed, valuation is based off my forecast of future EPS and a P/E multiple derived by benchmarking growth with SaaS peers. A reasonable haircut is taken from peer P/E multiple to adjust for the slower growing enterprise segment.

P/E Based Valuation

	Bear	Base	Bull
2022E EPS - JS - Base Case	$1.13	$1.47	$1.61
Normalized 2021 Multiple	17.0x	22.0x	26.0x
2022E Value/Share	**$19.19**	**$32.44**	**$44.09**
Upside to Current Price	***0.8%***	***70.4%***	***131.5%***
IRR	***0.3%***	***19.4%***	***32.3%***
Upside/Downside Ratio		***(90.7x)***	***(169.5x)***

FCF Based Valuation

	Bear	Base	Bull
2022E FCF - JS	$350.0	$507.5	$545.0
Normalized Forward Multiple	14.0x	18.0x	20.0x
TEV	**$4,900**	**$9,135**	**$10,900**
Less: Debt	(1,636)	(1,636)	(1,636)
Plus: Cash	821	998	1,069
Equity Value	**$4,084**	**$8,497**	**$10,332**
Shares	267	267	267
Value/Share	**$15.27**	**$31.77**	**$40.93**
Upside to Current Price	***(19.8%)***	***66.9%***	***115.0%***
IRR	***(7.1%)***	***18.6%***	***29.1%***
Upside/Downside Ratio		***3.4x***	***5.8x***

Alternative Valuation

- Adjusted Asset value

Adjustments (in $MM)	
BV of Equity	1,240,519
Goodwill	-2,132,249
Intangibles	2,328,088
Adjusted Asset Value of Equity	1,436,358

Goodwill: Nuance was acquisitive prior to 2018. Goodwill is largely from legacy acquisitions. For asset values, I decided to remove the $2.1bn acquisition related goodwill from equity value.
Intangibles: the company provided a detailed breakdown of intangibles, including customer list, trademark and technology. I decided to keep everything that the company has already calculated and add to this list the value of R&D, brand value and workforce value.
Workforce: using the total number of employees of 6,700, average wage of $150k, and a 10% reproduction cost, I calculated a workforce value of $0.1 bn.

- Earnings power

Forward P/E based calculation largely reflects the smoothed cash flow and earnings for Nuance. Including
Smoothed revenue growth: revenue growth for Nuance over the next 2 years will be distorted due to the cloud transition. However, by 2022, I believe the revenue growth will reach a steadier state as HIM is mostly ramped down.
Smoothed margin: similarly, 2022 margin will reflect a steady state margin for Nuance post cloud transition. Margin will be lifted as a result of the healthcare business moving from lower margin HIM business to higher margin DMO product.

- Growth

	Latest	Smoothed
D/P	4.2%	5.0%
g	-4%	15%
h	0%	-5.0%
HPR	**0.0%**	**15.0%**

Distribution Yield: Calculated as (dividend + net share repurchases +net debt paydown+ interest)/TEV at the mid-year. Historical D/P is not a good reference given different business segments and management team. I decided to use a proxy to the latest yield for a smooth distribution yield forecast.
Earnings growth: I forecasted earnings growth of 20%+ for the next two years and long term at ~15%
Multiples: as explained earlier, I used a multiple benchmarked to comparable companies. Multiples are high currently at transition period but long term will contract to a reasonable number.