Canaccord Genuity Capital Markets

26 May 2021

Lowering Target Price

DUG Technology Limited

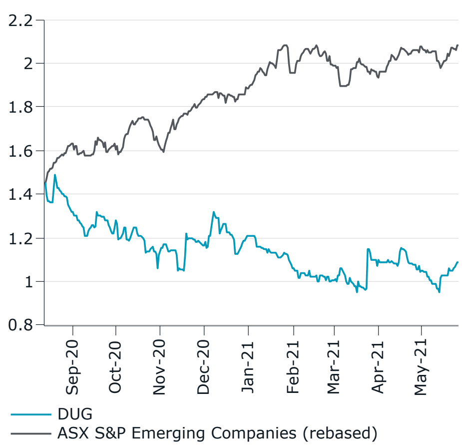
Services

Rating	Price Target
BUY *unchanged*	**A$1.76↓** *from A$1.88*
DUG-ASX	Price **A$1.10**

Market Data

52-Week Range (A$) :	0.95 - 1.49
Avg Daily Vol (M) :	0.2
Market Cap (A$M) :	109.4
Shares Out. (M) :	99.5
Dividend /Shr (A$) :	0.00
Dividend Yield (%) :	0.0
Enterprise Value (A$M) :	120

FYE Jun	2020A	2021E	2022E	2023E
Sales (US$M)	49.4	42.5↓	53.0↓	64.8↓
Previous	-	*50.6*	*58.0*	*69.3*
EBITDA (US$M)	9.2	0.1↓	11.1↓	15.2↓
Previous	-	*7.2*	*12.5*	*18.3*
EBIT (US$M)	(0.0)	(8.1)↓	1.3↓	4.5↓
Previous	-	*(1.0)*	*2.3*	*7.7*
EV/EBITDA (x)	12.3	768.5	9.0	6.7
EV/EBIT (x)	0.0	(11.8)	74.2	22.4
Net Debt (Cash) (US$M)	28	11↑	14↑	16↑
Previous	-	*7*	*8*	*13*



Source: FactSet

Priced as of close of business 26 May 2021

Canaccord Genuity (Australia) Limited has received a fee as Lead Manager to the DUG Technology Limited Initial Public Offering announced on 6 July 2020.

Allan Franklin | Senior Analyst | Canaccord Genuity (Australia) Ltd. | afranklin@cgf.com | +61 3 8688 9178

New 'green compute' carbon-free HPC data centre and trading update

Investment Recommendation

Over the past week, DUG has signed CSIRO as a customer, been granted a US patent, announced a new facility and provided a trading update. Pertinently, the company has firmed up plans to build a high-performance-computing (HPC) data centre in Geraldton (Western Australia), powered by wind, solar and potentially a hydrogen battery solution. This is a logical and timely development with a strategically placed facility (adjacent to the Square Kilometre Array (SKA) radioastronomy project and renewable energy sources), in our view, with a low upfront capital commitment (A $5.0m) and, importantly, we believe it positions DUG to better service Australian private and public HPC sectors over the long term.

Heightened attention around the carbon energy impost of cryptocurrency mining is a timely reminder, in our view, that energy-efficient systems and green credentials will play an increasingly important role in HPC and data centres more generally going forward. Clear evidence of this is provided by ICRAR (the Australian arm of SKA), which has clear ambitions to reduce emissions relating to its HPC (here).

In its trading update, DUG noted that trading in the four months to April 2021 has been below the pcp (US$11.8m versus US$13.8m). Increasing tender activity and a 10% increase in new work proposals (US$45.9m) in the Services division (four months to April 2021 relative to 2019) provides a clearer view to the near-term outlook, in our view. We have adjusted our forecasts and refer to our recent report, which provides context on the improving Oil & Gas end market conditions.

Whilst the trading update is disappointing, HPCaaS and Software revenues have continued to grow. Validation around DUG's offerings and use cases domestically is building on the back of recent agreements with research-intensive organisations (e.g. CSIRO, Curtin University, Harry Perkins Medical Institute). We reiterate our positive view and retain our BUY recommendation and lower our DCF-based price target to $1.76 (from $1.88).

Green compute is becoming more front of mind. Corporations globally are demonstrating increasing awareness and willingness to reduce carbon emissions (KPMG). The impost of electricity usage by cryptocurrency mining (~0.5% of global electricity consumption, Cambridge Bitcoin Electricity Consumption Index) was recently highlighted by Elon Musk. Separately, ~1.0% of global emissions emanates from data centre IT load (energyinnovation.org).

Initially self-funding, with compute to be brought on as demand requires. The Geraldton project can be funded internally at the outset with a $5.0m initial capex envelope. Construction is scheduled to begin in 3Q CY21 with the Stage 1 data hall being commissioned in 1H CY22. Compute will be added 'just-in-time'. Planned compute capacity of 200 petaflops (6MW of power) for Stage 1 data hall compares to DUG's current group capacity of 30 petaflops.

DUG has experience in building and operating large facilities. In 2019, DUG undertook a similar build in Houston - a time-lapse video (here) provides context of the facilities scale. As with the proposed Geraldton site, compute can be added just-in-time.

Use-case validation building. We believe the recent agreement with CSIRO, encompassing access to DUG's compute, storage and services over the coming two years, provides further validation that the company has an important role to play in servicing Australia's research-intensive organisations.

For important information, please see the Important Disclosures beginning on page 11 of this document.

Figure 1: DUG Technology (DUG-ASX); Canaccord Genuity forecasts

DUG Technology (DUG)		Share Price (A$)		$1.10	Share Price (US$)	$0.86		Year end 30 June	
Profit & Loss (US$m)	**2020A**	**2021E**	**2022E**	**2023E**	**Valuation Ratios**	**2020A**	**2021E**	**2022E**	**2023E**
Sales revenue	49.4	42.5	53.0	64.8	EV/EBITDA (x)	nmf	768.5	9.0	6.7
Total revenue	**49.4**	**42.8**	**53.0**	**64.8**	EV/EBIT (x)	nmf	-11.8	74.2	22.4
EBITDA	**9.2**	**0.1**	**11.1**	**15.2**	EPS (US$) (NPAT)	-0.21	-0.12	0.00	0.02
Depreciation	-9.1	-8.1	-9.5	-10.5	P/E (x) (NPAT)	nmf	-7.3	-269.7	39.6
EBITA	**0.1**	**-7.9**	**1.5**	**4.7**	EV/EBITDA Rel - XAO		73.9	0.9	0.7
Amortisation	-0.1	-0.2	-0.2	-0.2	EV/EBITDA Rel - XSO		63.0	0.8	0.6
EBIT	**0.0**	**-8.1**	**1.3**	**4.5**	DPS (US$)	0.00	0.00	0.00	0.00
Net interest	-6.8	-1.6	-1.7	-1.7	Dividend yield (%)	0.0%	0.0%	0.0%	0.0%
Other	0.0	0.0	0.0	0.0	CFPS (US$)	0.07	0.02	0.10	0.13
Pre-tax profit	**-6.8**	**-9.8**	**-0.3**	**2.9**	Price / CFPS (x)	12.5	39.8	8.6	6.4
Tax expense	-1.4	0.0	0.0	-0.7	**Profitability Ratios**	**2020A**	**2021E**	**2022E**	**2023E**
NPAT (attributable)	**-8.2**	**-9.8**	**-0.3**	**2.2**	EBITDA margin (%)	18.6%	0.3%	20.9%	23.4%
NPAT (reported)	**-13.0**	**-11.7**	**-0.3**	**2.2**	EBIT margin (%)	0.0%	-19.1%	2.5%	7.0%
Cash Flow (US$m)	**2020A**	**2021E**	**2022E**	**2023E**	ROE (%)	-162.6%	-94.8%	-1.5%	10.0%
Operating EBITDA	**9.2**	**0.1**	**11.1**	**15.2**	ROA (%)	0.0%	-12.1%	1.9%	6.4%
Interest and tax	-3.1	-1.6	-1.7	-2.4	ROIC (%)	-32.3%	-26.2%	-0.7%	4.7%
Working capital/other	-1.8	3.7	0.5	0.5	**Capital Structure**	**2020A**	**2021E**	**2022E**	**2023E**
Operating cashflow	**4.3**	**2.1**	**9.9**	**13.3**	Enterprise value (US$m)	88.7	96.1	99.7	101.5
Capex	-3.2	-11.4	-12.0	-13.7	Net Debt (cash) (US$m)	28.0	10.8	14.3	16.2
Free cashflow	**1.1**	**-9.2**	**-2.1**	**-0.4**	Net debt / equity (%)	742.9%	51.8%	69.8%	71.3%
Acquisitions	0.0	0.2	0.0	0.0	Net debt / EBITDA (x)	3.0	86.2	1.3	1.1
Equity issued	0.0	28.7	0.0	0.0	NTA / share (US$)	0.06	0.21	0.20	0.22
Borrowings	10.4	-15.4	0.0	0.0	Price / NTA (x)	17.5	4.2	4.2	3.8
Other	0.0	-1.4	0.0	0.0	Shares on issue (m)	62.6	99.5	99.5	99.5
Net cashflow	**11.5**	**2.9**	**-2.1**	**-0.4**	**Growth Ratios**	**2020A**	**2021E**	**2022E**	**2023E**
Opening cash	2.0	12.0	13.8	10.2	Sales revenue (%)	-5.2%	-13.9%	24.7%	22.2%
Closing cash	**12.0**	**13.8**	**10.2**	**8.4**	Gross profit (%)	-5.3%	-13.5%	24.0%	22.2%
Balance Sheet (US$m)	**2020A**	**2021E**	**2022E**	**2023E**	EBITDA (%)	-6.4%	-98.6%	8763.1%	37.0%
Cash	12.0	13.8	10.2	8.4	EBIT (%)	nmf	nmf	-116.5%	237.4%
Receivables	7.8	7.6	8.7	10.7	NPATA (%)	nmf	nmf	-96.8%	-781.0%
Inventories	0.0	0.0	0.0	0.0	EPS (NPATA) (%)	nmf	nmf	-96.8%	-781.0%
PPE	22.8	25.9	28.1	31.2	DPS (%)	0.0%	0.0%	0.0%	0.0%
Intangibles	0.3	0.3	0.3	0.3	**Interim P&L (US$m)**	**1H20A**	**2H20A**	**1H21A**	**2H21E**
Other assets	21.8	21.8	21.8	21.8	Sales revenue	26.8	22.6	24.2	18.4
Total assets	**64.7**	**69.4**	**69.2**	**72.3**	Gross profit	26.8	22.6	24.4	18.4
Borrowings	40.1	24.6	24.6	24.6	**EBITDA**	**5.1**	**4.1**	**2.5**	**-2.3**
Payables	3.0	5.0	5.2	6.1	EBIT	0.3	-0.3	-1.3	-6.8
Other liabilities	17.9	17.9	17.9	17.9	Pre-tax profit	-1.0	-10.6	-3.9	-7.8
Total liabilities	**61.0**	**47.5**	**47.6**	**48.6**	**NPAT (reported)**	**-2.5**	**-10.5**	**-4.5**	**-7.2**
Net assets	**3.8**	**21.9**	**21.6**	**23.8**	EPS (US$) (NPAT)	-0.04	-0.17	-0.04	-0.07
Board of Directors					DPS (US$)	0.00	0.00	0.00	0.00
Wayne Martin				Chairman	**Valuation**				
Matt Lamont				Founder & Managing Director	**DCF**				
Phil Schwan				CTO	Cost of equity	12.0%	Beta		1.5
Louise Bower				Director	Cost of debt	5.5%	WACC post tax		10.4%
Frank Sciarone				Independent NED	Terminal growth rate	2.5%	**DCF (A$/share)**		**$1.76**
Michael Malone				Independent NED					
Mark Puzey				Independent NED	**Capitalisation of future earnings**			**2022E**	**2023E**
Shareholders		**Shares**		**%**	EBITDA (US$m)			11.1	15.2
Matt Lamont		23.8		23.9%	EV/ EBITDA multiple			10.0	10.0
Perennial Value		13.8		13.9%	**Enterprise value (US$m)**			**110.9**	**151.9**
Phil Schwan		7.2		7.3%	Net cash/ (debt) (US$m)			-14.3	-16.2
Regal Funds		5.9		5.9%	Equity value (US$m)			96.5	135.8
TIGA		5.1		5.1%	**Equity value (A$/share)**			**$1.24**	**$1.75**
Top 20 shareholders		**70.6**		**71.0%**					

Source: Company reports, Canaccord Genuity estimates

Trading update

We have updated our forecasts on the back of the trading update.

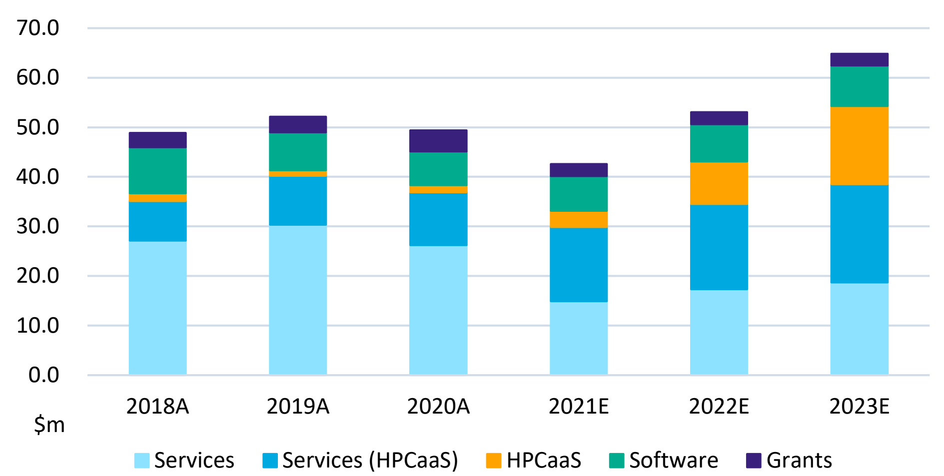
- A more challenging 2H21E than we expected has led to a recalibration of our near-term forecasts. With a broadly fixed cost base, we now expect an EBITDA loss in 2H21E.
- To incorporate lower baseline revenue moving into FY22E, we have pulled back our Services revenue expectation with the net result being -8.5% group revenue.
- Our FY22E revenue (US$53.0m) is positioned 6% higher than three-year average group revenue achieved in FY18-20 (US$50.1m). This assumes continuing growth in HPCaaS and Software with a recovery in Services revenue, but not to levels achieved in FY18-20 (see Figure 3).
- DUG noted improved tender activity and increasing project awards. In the four months to April 2021, the company has written US$45.9m in new work proposals, 10% higher than the same period in 2019.
- The A$5.0m upfront capital required for the Geraldton HPC facility has been incorporated into our forecasts.

Figure 2: Forecast changes

		2021E			2022E	
US$m	**Old**	**New**	**Change**	**Old**	**New**	**Change**
Revenue	**50.6**	**42.5**	**-15.9%**	**58.0**	**53.0**	**-8.5%**
Growth		-13.9%			24.1%	
Costs	-43.4	-42.4	-2.2%	-45.5	-42.0	-7.8%
EBITDA	**7.2**	**0.1**	**-98.3%**	**12.5**	**11.1**	**-11.3%**
Growth		nmf			nmf	
Margin	14.2%	0.3%		21.6%	20.9%	
NPATA	**-2.7**	**-9.8**	**nmf**	**0.5**	**-0.3**	**nmf**
Growth		nmf			nmf	
Net Debt	7.4	10.8		8.1	14.3	

Source: Canaccord Genuity estimates

Figure 3: Divisional revenue



Source: Company Reports, Canaccord Genuity estimates

Announcement of HPC data centre in Geraldton

DUG has announced its intention to build a carbon-free, HPC data centre in Geraldton, Western Australia. Key points include:

- The site will be powered by renewable energy and will utilise DUG's patented immersion-cooling system.
- The project has support of the Yamatji Nation peoples, who will assume ownership of the land later this year.
- DUG expects construction to begin in 3Q CY21 with the Stage 1 data hall due to be commission in 1H CY22.
- Upfront capital committed to the project is $5.0m, with compute to be added in a 'just-in-time' manner beyond the initial build.
- Initial compute capacity of 200 petaflops (6MW of power) with optionality to expand to beyond 1,000 petaflops, as demand dictates.

Stakeholder engagement has been front of mind for this development. The HPC campus will sit on 45 hectares of leased land, that will ultimately be owned by the Yamatji Nation Trust. DUG expects support and ongoing engagement with the local community to lead to employment opportunities being made available over time.

The goal for the campus is to be completely powered by renewables through a mix of locally sourced solar and wind power as well as the potential for an onsite hydrogen battery system. The latter is under investigation with consideration for how it may be funded.

In its recent MoU partnership announcement with Curtin University, DUG discussed the prospects of research into green innovation and radio astronomy. Today's announcement firms up this narrative. Curtin University has expertise in renewable energy and additionally has deep expertise in astronomy, including access to the SKA project (DUG 15 April 2021 announcement).

The facility will be built to meet the Federal Government's requirements for handling sensitive information and will be connected to the nearby Mid West TAFE, which has an AARNET large fibre connection to Perth (i.e. a low latency connection).

Green compute narrative is building…

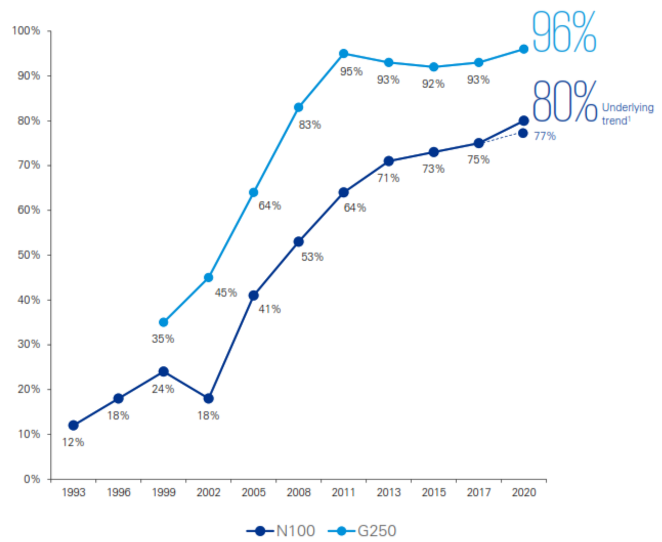
Data centres account for ~1% of global energy consumption (energyinnovation.org), with cryptocurrency mining accounting for an additional ~0.5% (Cambridge Bitcoin Electricity Consumption Index).

Green computing, processing data in an environmentally sustainable manner, has become more front of mind in recent periods. This was most recently highlighted by Elon Musk's consternation of bitcoin's energy usage. He has subsequently encouraged the use of green energy for bitcoin mining purposes (businessinsider).

A trade-off exists between energy costs, public brand perception and lower emissions. When considering HPC applications, installation costs, altered performance and maintenance requirements are likely front of mind, in our view. These are areas of both strengths DUG currently offers through its products and services as well as problems that the company seeks to solve for end users through its energy efficient systems. For example, the company's systems have a Power Usage Effectiveness of 1.05x, a 46% power cost saving relative to a traditional air-cooled data centre (Uptime Institute, 2019).

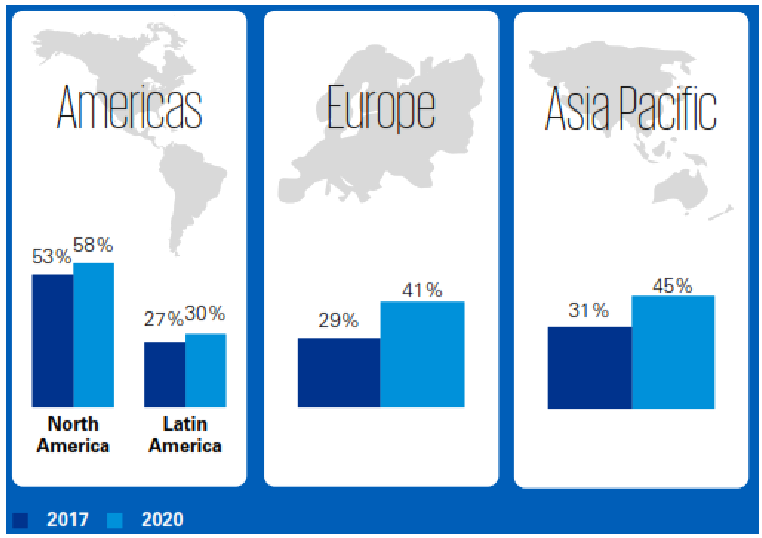
A survey undertaken by KPMG exploring sustainability reporting in 2020 provides some useful insights into sustainability and climate reporting.

Figure 4: Growth in global sustainability reporting rates (base 5,200 N100* companies and 250 G250 companies)



Source: KPMG Survey of Sustainability Reporting 2020
*N100 = top 100 companies headquartered in 52 selected countries

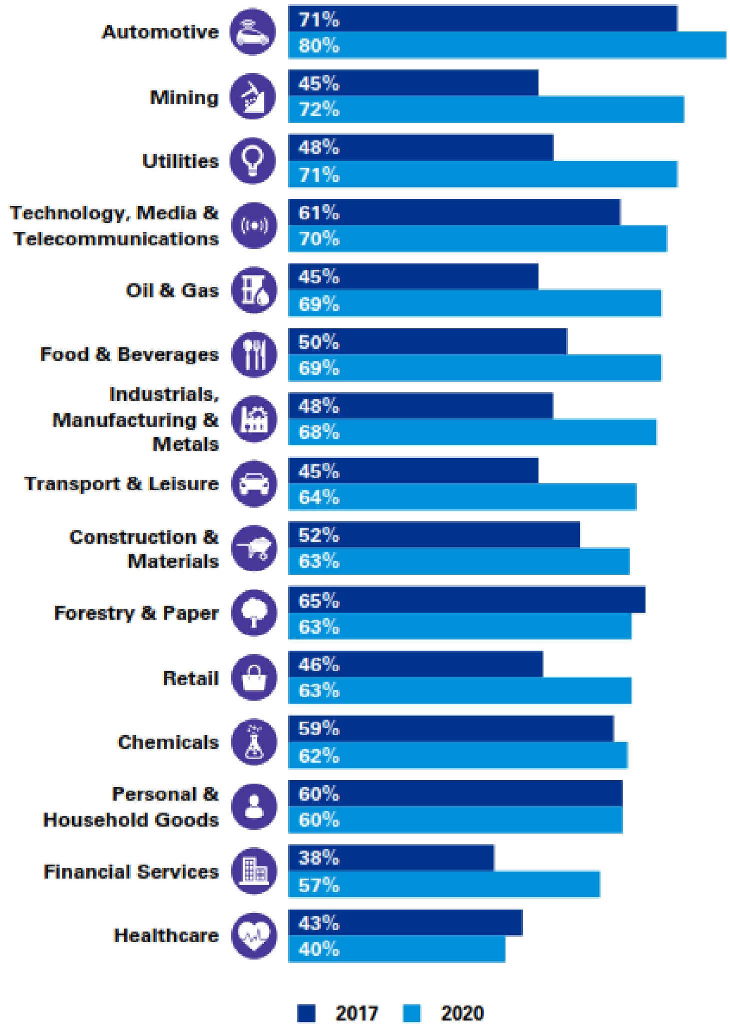
Figure 5: Acknowledgement of climate risk in financial reporting: N100 by region (selected regions)



Source: KPMG Survey of Sustainability Reporting 2020

When considering carbon reduction targets, a notable change has been evidenced since 2017. At a sector level, standout mentions relevant to DUG include Oil & Gas (a significant increase in companies disclosing carbon reduction targets) and Healthcare (the lowest reading for companies disclosing carbon reduction targets).

Figure 6: Companies disclosing carbon reduction targets in their reporting: N100 by sector (base 3,983 N100 companies that report on sustainability)



Source: KPMG Survey of Sustainability Reporting 2020

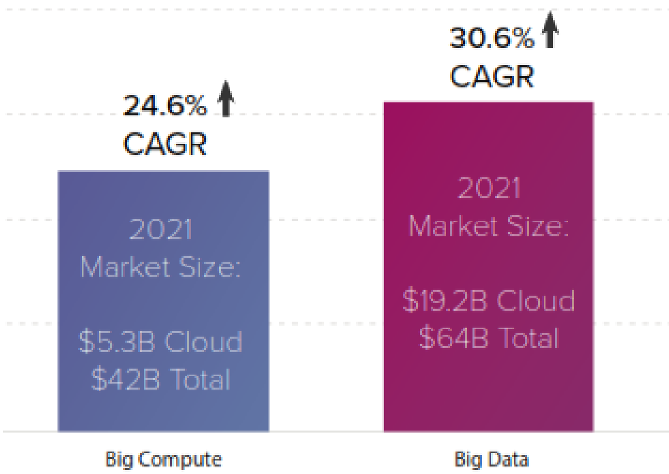
…as is 'big compute'

Big compute is the use of HPC hardware and specialised software at scale with the aim to achieve breakthroughs in science, engineering and business. The approach enables scientists to test hypotheses, for example future weather patterns or how stars form.

Big data on the other hand starts with a high volume of observed data points with the goal of finding representative models.

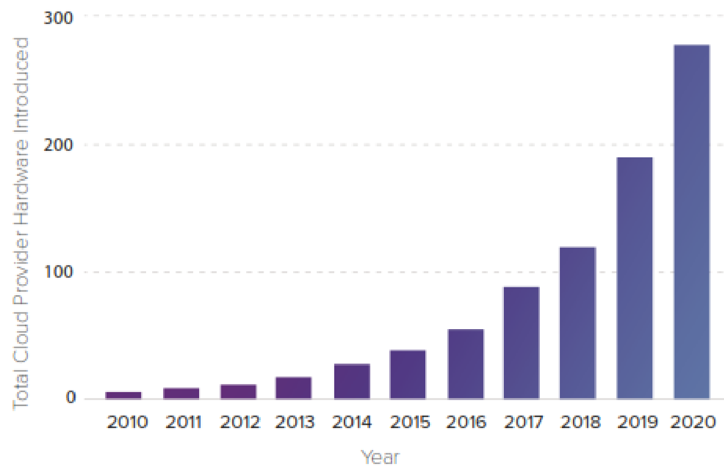
Both require modern IT architectures with big compute more akin to HPC use cases.

Figure 7: Growth of big compute versus big data in 2021; both are growing very strongly



Source: Marketandmarkets, Hyperion Research

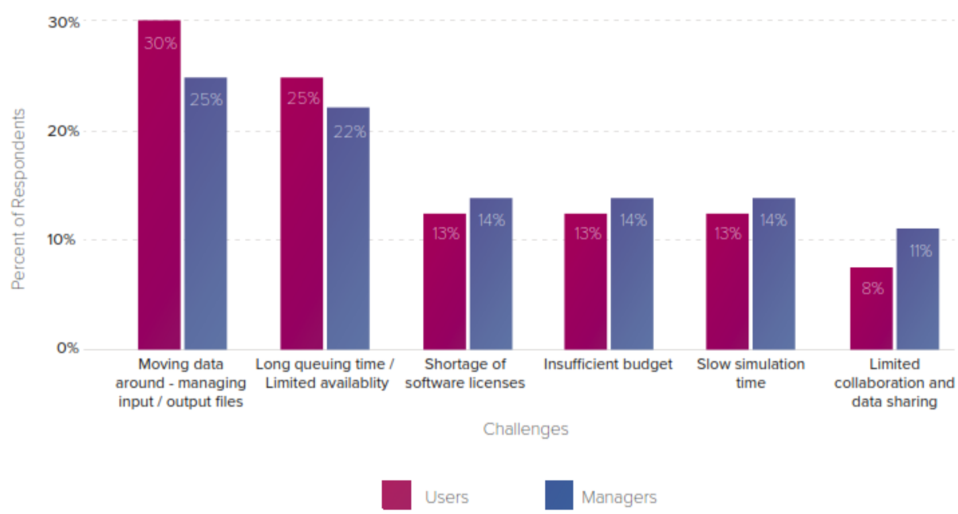
Figure 8: Cloud provider hardware options available; New architectures and enterprise adoption growth is accelerating



Source: Rescale Cloud HPC Platform Analytics

The top two current pain points for HPC users, according to a recent survey are data management and long queue times or limited availability.

Figure 9: What are the top challenges to maintaining an optimal HPC environment?



Source: 2020 HPC Practitioner Survey

DUG's use-case validation in Australia is building as well

We are encouraged by DUG's recent progress in signing research-intensive client both within Australia (CSIRO, Curtin University and Harry Perkins Medical Institute) and abroad (Imperial College London, a top 10 global university).

Notably since our last report, CSIRO has agreed to use DUG McCloud compute, storage and services under a formal agreement. DUG expects headline revenue to be $700,000 for HPC and storage and $555,000 for services over the coming two years.

The high-profile signing provides strong validation, in our view, and we suspect this could lead to more meaningful discussions with other parties both locally and offshore. Progress in diversifying DUG's revenue streams is becoming more evident.

The CSIRO announcement follows shortly after the signing of Curtin University to collaborate in high-performance computing (HPC), education and research.

- A decade-long partnership where DUG will provide HPC, storage and archiving capabilities as well as DUG Insight (processing and visualisation software) and related support activities.
- Specific areas of research interest include astrophysics, biomedicine, and meteorology.

Examples of past interactions DUG has had with Curtin include:

- Co-development of algorithms that can detect and monitor space junk and satellites in the Earth's orbit; and
- In 1H CY20 DUG processed 450 hours of data from the Murchison Widefield Array, a precursor to the Square Kilometre Array radio telescope. DUG worked with ICRAR (the Australian arm of the SKA) and Curtin researcher Associate Professor Cathryn Trott to optimise the code and ensure efficient use of the compute. The optimised algorithm delivered the processed data 125x faster than those achieved at Pawsey (a government supported HPC facility). More detail can be found here.

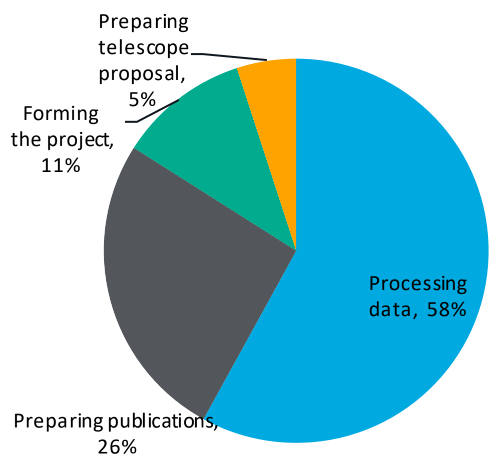
Separately, we believe there is meaningful scope for DUG to conduct HPC work within the radio astronomy market into the medium term

Whilst in early stages of the project build, the Australian arm of the SKA radioastronomy project will require compute capacity in excess of 100 petaflops for the baseline workload (skatelescope.org) with the South African arm requiring an equivalent compute load. Further information on the SKA project can be found in our prior research (here).

We understand that additional workloads are likely to come from astronomers looking to process chosen data sets for their research projects. As is the case today, astronomers crunch data sets from other telescopes to conduct their data sets.

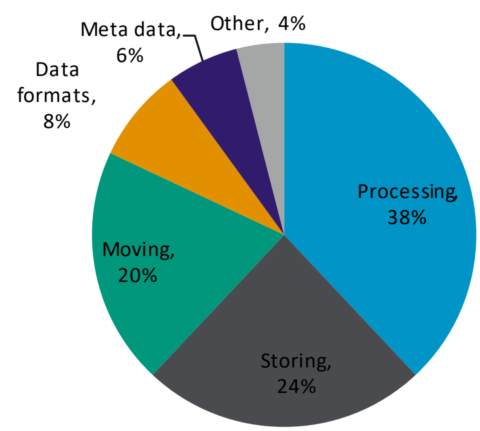
A survey of the radio astronomy data user community in Australia by the Australian SKA Regional Centre provided some interesting insights into current pain points for the community. Notably, processing data is the most challenging stage in observational projects and processing, storing and moving data are significant pain points when working with radio astronomy data.

Figure 10: What is the most challenging stage in observational projects?



Source: Australian SKA Regional Centre

Figure 11: What are the biggest issues you encounter when working with radio data?

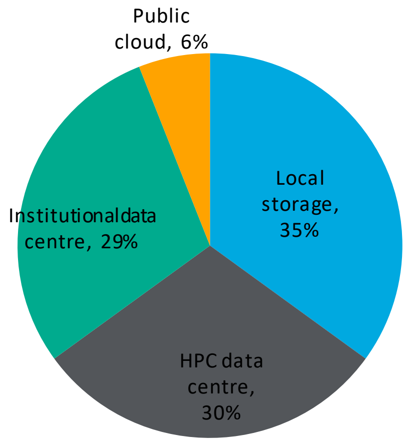


Source: Australian SKA Regional Centre

Additionally, the biggest issues encountered using astronomy software and tools included:

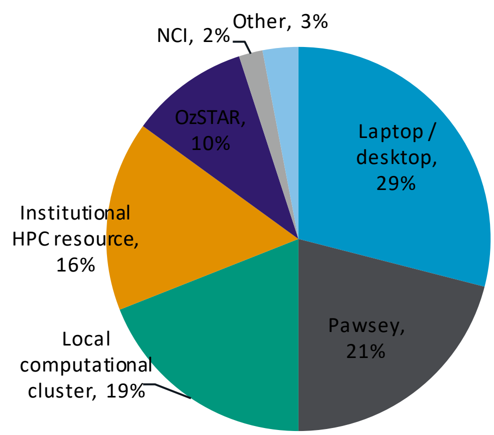
- Software is poorly supported and maintained (21% of respondent's concerns)
- Software is poorly documented and there is a lack of use case examples (18%)
- Software is poorly written (11%)
- Lack of flexibility and support for certain use cases which often results in bespoke software creation (9%)
- Support for large datasets (9%)
- Lack of support for different platforms (7%)
- Data format capability (7%)
- Concern that the current software packages will not be capable of supporting the next generation of telescopes (5%)
- Other (13%)

Figure 12: Where is your data stored?



Source: Australian SKA Regional Centre

Figure 13: Where do you process your data?



Source: Australian SKA Regional Centre

Importantly, there looks to be meaningful scope for DUG to service the radio astronomy community needs from both a data storage and processing perspective.

As detailed above, a substantial proportion of storage is either held locally or in institutional data centres and a significant proportion of data processing is still conducted on laptop/desktop or local computational machines

Other research-intensive use cases are broad based

In its Annual Report 2019-20, Pawsey (a government funded HPC facility) confirmed that requests were 1.8x the hours available.

- The top four users were Curtin University, Monash University, University of Melbourne and UNSW.
- Global users and collaborators totalled 390.
- Of the workload, 36% was for chemistry and material science, 21% was for radio astronomy and 18% was for engineering and fluid mechanics.
- FY20 revenue totalled $15.8m and largely came from the National Collaborative Research Infrastructure Strategy Grant (40%) and the WA Government (28%).

Pawsey provided 10 use case examples, which can be found on pages 24-43 (here). In brief, these include:

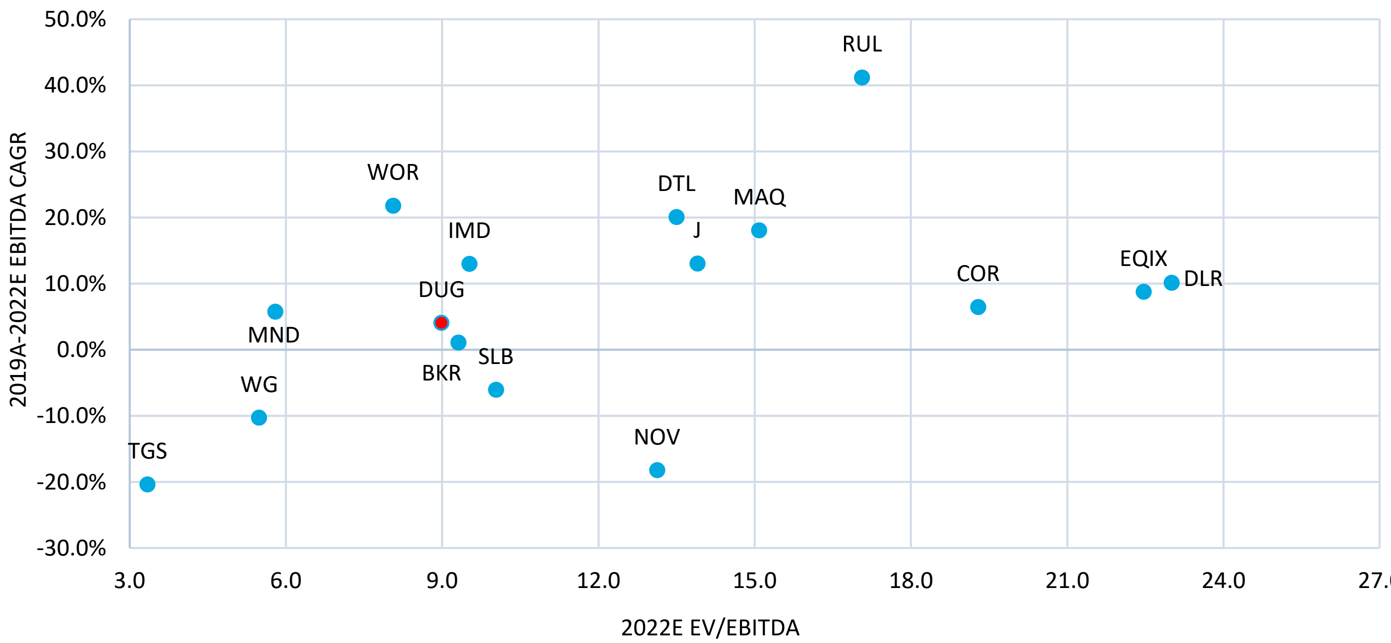
- ICRAR – astronomy
- Curtin University – extra-terrestrial geology
- UNSW – computational fluid dynamics
- UWA – aquaculture
- University of Sydney – chemistry, physics
- APPF – plant biology
- WA Govt DPI – biology
- WA Govt DPI – plant pathology
- University of Melbourne – biomedical engineering, fluid physics
- RMIT – biology

Valuation and peer group comparison

Our 12-month price target has been lowered to $1.76/share (from $1.88/share). For reference, at our target price, DUG would trade on a FY22E EV/EBITDA of 13.6x (FY23E 10.0x).

DUG's evolving business model and product offering lends itself to a range of comparisons to peers across a range of sectors. We have positioned DUG against c.30 listed companies to consider its market positioning and valuation optionality: (1) Australian businesses that offer services to the resources sector; (2) Australian- and US-listed technology and data centre businesses (selected names with hardware, software or SaaS characteristics); and (3) Global Oil & Gas and geophysical mapping businesses.

Figure 14: Valuation versus growth comparison; DUG is well positioned to 'move to the right' on strong execution and market comfort in the growth optionality and trajectory



Source: FactSet, IRESS, Canaccord Genuity estimates (for DUG only)

Appendix: Important Disclosures

Analyst Certification

Each authoring analyst of Canaccord Genuity whose name appears on the front page of this research hereby certifies that (i) the recommendations and opinions expressed in this research accurately reflect the authoring analyst's personal, independent and objective views about any and all of the designated investments or relevant issuers discussed herein that are within such authoring analyst's coverage universe and (ii) no part of the authoring analyst's compensation was, is, or will be, directly or indirectly, related to the specific recommendations or views expressed by the authoring analyst in the research, and (iii) to the best of the authoring analyst's knowledge, she/he is not in receipt of material non-public information about the issuer.

Analysts employed outside the US are not registered as research analysts with FINRA. These analysts may not be associated persons of Canaccord Genuity LLC and therefore may not be subject to the FINRA Rule 2241 and NYSE Rule 472 restrictions on communications with a subject company, public appearances and trading securities held by a research analyst account.

Sector Coverage

Individuals identified as "Sector Coverage" cover a subject company's industry in the identified jurisdiction, but are not authoring analysts of the report.

Investment Recommendation

Date and time of first dissemination: May 26, 2021, 04:20 ET

Date and time of production: May 26, 2021, 04:20 ET

Target Price / Valuation Methodology:

DUG Technology Limited - DUG

Our 12-month price target for DUG is A$1.76/share. This is based on a DCF valuation which assumes a WACC of 10.4% (12.0% cost of equity, 20.0% debt to equity and terminal growth of 2.5%).

Risks to achieving Target Price / Valuation:

DUG Technology Limited - DUG

Brand damage from technology-related issues: With technology operating services across multiple end-user touch points, service levels and uptime performance are critically important. Similarly, data security breaches as a result of cyberattacks, data theft or human error could impact brand reputation and client demand.

Commodity price volatility: The business has been impacted in recent months by oil price volatility, and continuing uncertainty may lead to long-term changes in end-market demand for services.

Foreign exchange movements: DUG's functional currency is US dollars. Shares are listed in Australian dollars and with no hedging in place against movements in exchange rates, translation risk is present.

Increasing competition or technology advancements: The business operates in competitive and fast changing markets. The relevance of products and services, product pricing, customer relationships and brand reputation should be monitored.

IP protection and patent rights: Patent applications may be challenged or not granted, and with this, DUG may not be able to adequately protect its IP from competing products.

The company is currently a co-respondent in litigation alleging patent infringement. The outcome of this litigation may require damages to be paid and/or alteration of operations.

Reliance on key personnel: DUG is a founder-led business with a track record of long tenures and a consistent strategy. Changes to this dynamic, especially relating to Matt Lamont, Phil Schwan and Troy Thompson would warrant caution. Failure to attract, train and/or retain adequately skilled employees could have an adverse impact on the business going forward.

Slower-than-expected uptake of HPCaaS services and DUG McCloud platform, especially in FY21: Adoption of these offerings and expansion to use cases outside the resources sector may take longer than expected, impacting operating performance and investor sentiment.

Distribution of Ratings:

Global Stock Ratings (as of 05/26/21)

Rating	Coverage Universe		IB Clients
	#	%	%
Buy	610	64.62%	41.64%
Hold	168	17.80%	25.00%
Sell	10	1.06%	20.00%
Speculative Buy	144	15.25%	66.67%
	944*	100.0%	

*Total includes stocks that are Under Review

Canaccord Genuity Ratings System

BUY: The stock is expected to generate risk-adjusted returns of over 10% during the next 12 months.

HOLD: The stock is expected to generate risk-adjusted returns of 0-10% during the next 12 months.

SELL: The stock is expected to generate negative risk-adjusted returns during the next 12 months.

NOT RATED: Canaccord Genuity does not provide research coverage of the relevant issuer.

"Risk-adjusted return" refers to the expected return in relation to the amount of risk associated with the designated investment or the relevant issuer.

Risk Qualifier

SPECULATIVE: Stocks bear significantly higher risk that typically cannot be valued by normal fundamental criteria. Investments in the stock may result in material loss.

12-Month Recommendation History (as of date same as the **Global Stock Ratings** table)

A list of all the recommendations on any issuer under coverage that was disseminated during the preceding 12-month period may be obtained at the following website (provided as a hyperlink if this report is being read electronically) http://disclosures-mar.canaccordgenuity.com/EN/Pages/default.aspx

Required Company-Specific Disclosures (as of date of this publication)

DUG Technology Limited currently is, or in the past 12 months was, a client of Canaccord Genuity or its affiliated companies. During this period, Canaccord Genuity or its affiliated companies provided investment banking services to DUG Technology Limited.

In the past 12 months, Canaccord Genuity or its affiliated companies have received compensation for Investment Banking services from DUG Technology Limited .

In the past 12 months, Canaccord Genuity or any of its affiliated companies have been lead manager, co-lead manager or co-manager of a public offering of securities of DUG Technology Limited or any publicly disclosed offer of securities of DUG Technology Limited or in any related derivatives.

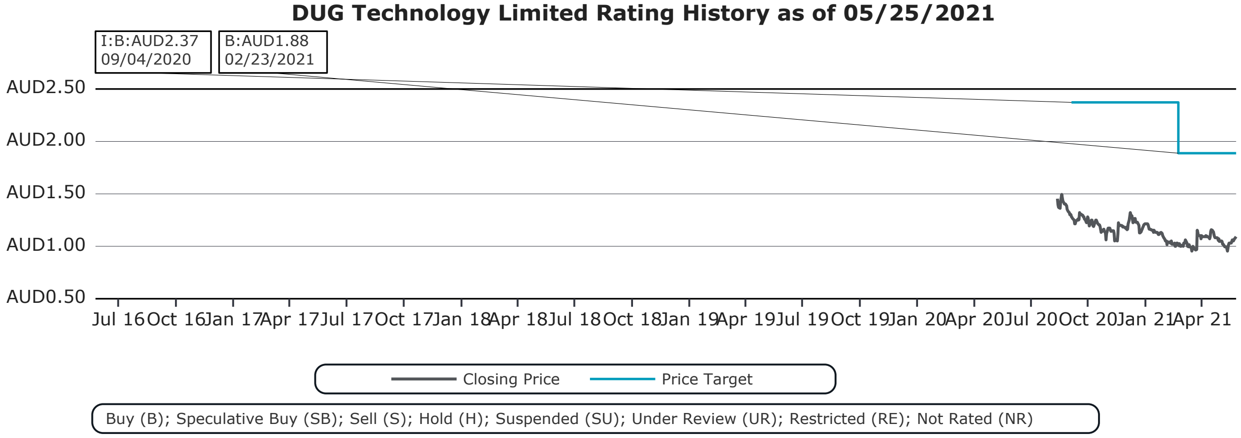
Canaccord Genuity acts as corporate broker for DUG Technology Limited and/or Canaccord Genuity or any of its affiliated companies may have an agreement with relating to the provision of Investment Banking services.

Canaccord Genuity or one or more of its affiliated companies intend to seek or expect to receive compensation for Investment Banking services from DUG Technology Limited in the next three months.

The primary analyst, a member of primary analyst's household, or any individual directly involved in the preparation of this research, has a long position in the shares or derivatives, or has any other financial interest in DUG Technology Limited, the value of which increases as the value of the underlying equity increases.

Canaccord Genuity (Australia) Limited has received a fee as Lead Manager to the DUG Technology Limited Initial Public Offering announced on 6 July 2020.

DUG Technology Limited Rating History as of 05/25/2021



Required Company-Specific Disclosures (as of date of this publication)

Past performance

In line with Article 44(4)(b), MiFID II Delegated Regulation, we disclose price performance for the preceding five years or the whole period for which the financial instrument has been offered or investment service provided where less than five years. Please note price history refers to actual past performance, and that past performance is not a reliable indicator of future price and/or performance.

Online Disclosures

Up-to-date disclosures may be obtained at the following website (provided as a hyperlink if this report is being read electronically) http://disclosures.canaccordgenuity.com/EN/Pages/default.aspx; or by sending a request to Canaccord Genuity Corp. Research, Attn: Disclosures, P.O. Box 10337 Pacific Centre, 2200-609 Granville Street, Vancouver, BC, Canada V7Y 1H2; or by sending a request by email to disclosures@cgf.com. The reader may also obtain a copy of Canaccord Genuity's policies and procedures regarding the dissemination of research by following the steps outlined above.

General Disclaimers

See "Required Company-Specific Disclosures" above for any of the following disclosures required as to companies referred to in this report: manager or co-manager roles; 1% or other ownership; compensation for certain services; types of client relationships; research analyst conflicts; managed/co-managed public offerings in prior periods; directorships; market making in equity securities and related derivatives. For reports identified above as compendium reports, the foregoing required company-specific disclosures can be found in a hyperlink located in the section labeled, "Compendium Reports." "Canaccord Genuity" is the business name used by certain wholly owned subsidiaries of Canaccord Genuity Group Inc., including Canaccord Genuity LLC, Canaccord Genuity Limited, Canaccord Genuity Corp., and Canaccord Genuity (Australia) Limited, an affiliated company that is 80%-owned by Canaccord Genuity Group Inc.

The authoring analysts who are responsible for the preparation of this research are employed by Canaccord Genuity Corp. a Canadian broker-dealer with principal offices located in Vancouver, Calgary, Toronto, Montreal, or Canaccord Genuity LLC, a US broker-dealer with principal offices located in New York, Boston, San Francisco and Houston, or Canaccord Genuity Limited., a UK broker-dealer with principal offices located in London (UK) and Dublin (Ireland), or Canaccord Genuity (Australia) Limited, an Australian broker-dealer with principal offices located in Sydney and Melbourne.

The authoring analysts who are responsible for the preparation of this research have received (or will receive) compensation based upon (among other factors) the Investment Banking revenues and general profits of Canaccord Genuity. However, such authoring analysts have not received, and will not receive, compensation that is directly based upon or linked to one or more specific Investment Banking activities, or to recommendations contained in the research.

Some regulators require that a firm must establish, implement and make available a policy for managing conflicts of interest arising as a result of publication or distribution of research. This research has been prepared in accordance with Canaccord Genuity's policy on managing conflicts of interest, and information barriers or firewalls have been used where appropriate. Canaccord Genuity's policy is available upon request.

The information contained in this research has been compiled by Canaccord Genuity from sources believed to be reliable, but (with the exception of the information about Canaccord Genuity) no representation or warranty, express or implied, is made by Canaccord Genuity, its affiliated companies or any other person as to its fairness, accuracy, completeness or correctness. Canaccord Genuity has not independently verified the facts, assumptions, and estimates contained herein. All estimates, opinions and other information contained in this research constitute Canaccord Genuity's judgement as of the date of this research, are subject to change without notice and are provided in good faith but without legal responsibility or liability.

From time to time, Canaccord Genuity salespeople, traders, and other professionals provide oral or written market commentary or trading strategies to our clients and our principal trading desk that reflect opinions that are contrary to the opinions expressed in this research. Canaccord Genuity's affiliates, principal trading desk, and investing businesses also from time to time make investment decisions that are inconsistent with the recommendations or views expressed in this research.

This research is provided for information purposes only and does not constitute an offer or solicitation to buy or sell any designated investments discussed herein in any jurisdiction where such offer or solicitation would be prohibited. As a result, the designated investments discussed in this research may not be eligible for sale in some jurisdictions. This research is not, and under no circumstances should be construed as, a solicitation to act as a securities broker or dealer in any jurisdiction by any person or company that is not legally permitted to carry on the business of a securities broker or dealer in that jurisdiction. This material is prepared for general circulation to clients and does not have regard to the investment objectives, financial situation or particular needs of any particular person. Investors should obtain advice based on their own individual circumstances before making an investment decision. To the fullest extent permitted by law, none of Canaccord Genuity, its affiliated companies or any other person accepts any liability whatsoever for any direct or consequential loss arising from or relating to any use of the information contained in this research.

Research Distribution Policy

Canaccord Genuity research is posted on the Canaccord Genuity Research Portal and will be available simultaneously for access by all of Canaccord Genuity's customers who are entitled to receive the firm's research. In addition research may be distributed by the firm's sales and trading personnel via email, instant message or other electronic means. Customers entitled to receive research may also receive it via third party vendors. Until such time as research is made available to Canaccord Genuity's customers as described above, Authoring Analysts will not discuss the contents of their research with Sales and Trading or Investment Banking employees without prior compliance consent.

For further information about the proprietary model(s) associated with the covered issuer(s) in this research report, clients should contact their local sales representative.

Short-Term Trade Ideas

Research Analysts may, from time to time, discuss "short-term trade ideas" in research reports. A short-term trade idea offers a near-term view on how a security may trade, based on market and trading events or catalysts, and the resulting trading opportunity that may be available. Any such trading strategies are distinct from and do not affect the analysts' fundamental equity rating for such stocks. A short-term trade idea may differ from the price targets and recommendations in our published research reports that reflect the research analyst's views of the longer-term (i.e. one-year or greater) prospects of the subject company, as a result of the differing time horizons, methodologies and/or other factors. It is possible, for example, that a subject company's common equity that is considered a long-term 'Hold' or 'Sell' might present a short-term buying opportunity as a result of temporary selling pressure in the market or for other reasons described in the research report; conversely, a subject company's stock rated a long-term 'Buy' or "Speculative Buy' could be considered susceptible to a downward price correction, or other factors may exist that lead the research analyst to suggest a sale over the short-term. Short-term trade ideas are not ratings, nor are they part of any ratings system, and the firm does not intend, and does not undertake any obligation, to maintain or update short-term trade ideas. Short-term trade ideas are not suitable for all investors and are not tailored to individual investor circumstances and objectives, and investors should make their own independent decisions regarding any securities or strategies discussed herein. Please contact your salesperson for more information regarding Canaccord Genuity's research.

For Canadian Residents:

This research has been approved by Canaccord Genuity Corp., which accepts sole responsibility for this research and its dissemination in Canada. Canaccord Genuity Corp. is registered and regulated by the Investment Industry Regulatory Organization of Canada (IIROC) and is a Member of the Canadian Investor Protection Fund. Canadian clients wishing to effect transactions in any designated investment discussed should do so through a qualified salesperson of Canaccord Genuity Corp. in their particular province or territory.

For United States Persons:

Canaccord Genuity LLC, a US registered broker-dealer, accepts responsibility for this research and its dissemination in the United States. This research is intended for distribution in the United States only to certain US institutional investors. US clients wishing to effect transactions in any designated investment discussed should do so through a qualified salesperson of Canaccord Genuity LLC. Analysts employed outside the US, as specifically indicated elsewhere in this report, are not registered as research analysts with FINRA. These analysts may not be associated persons of Canaccord Genuity LLC and therefore may not be subject to the FINRA Rule 2241 and NYSE Rule 472 restrictions on communications with a subject company, public appearances and trading securities held by a research analyst account.

For United Kingdom and European Residents:

This research is distributed in the United Kingdom and elsewhere Europe, as third party research by Canaccord Genuity Limited, which is authorized and regulated by the Financial Conduct Authority. This research is for distribution only to persons who are Eligible Counterparties or Professional Clients only and is exempt from the general restrictions in section 21 of the Financial Services and Markets Act 2000 on the communication of invitations or inducements to engage in investment activity on the grounds that it is being distributed in the United Kingdom only to persons of a kind described in Article 19(5) (Investment Professionals) and 49(2) (High Net Worth companies, unincorporated associations etc) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (as amended). It is not intended to be distributed or passed on, directly or indirectly, to any other class of persons. This material is not for distribution in the United Kingdom or elsewhere in Europe to retail clients, as defined under the rules of the Financial Conduct Authority.

For Jersey, Guernsey and Isle of Man Residents:

This research is sent to you by Canaccord Genuity Wealth (International) Limited (CGWI) for information purposes and is not to be construed as a solicitation or an offer to purchase or sell investments or related financial instruments. This research has been produced by an affiliate of CGWI for circulation to its institutional clients and also CGWI. Its contents have been approved by CGWI and we are providing it to you on the basis that we believe it to be of interest to you. This statement should be read in conjunction with your client agreement, CGWI's current terms of business and the other disclosures and disclaimers contained within this research. If you are in any doubt, you should consult your financial adviser.

CGWI is licensed and regulated by the Guernsey Financial Services Commission, the Jersey Financial Services Commission and the Isle of Man Financial Supervision Commission. CGWI is registered in Guernsey and is a wholly owned subsidiary of Canaccord Genuity Group Inc.

For Australian Residents:

This research is distributed in Australia by Canaccord Genuity (Australia) Limited ABN 19 075 071 466 holder of AFS Licence No 234666. To the extent that this research contains any advice, this is limited to general advice only. Recipients should take into account their own personal circumstances before making an investment decision. Clients wishing to effect any transactions in any financial products discussed in the research should do so through a qualified representative of Canaccord Genuity (Australia) Limited or its Wealth Management affiliated company, Canaccord Genuity Financial Limited ABN 69 008 896 311 holder of AFS Licence No 239052.

For Hong Kong Residents:

This research is distributed in Hong Kong by Canaccord Genuity (Hong Kong) Limited which is licensed by the Securities and Futures Commission. This research is only intended for persons who fall within the definition of professional investor as defined in the Securities and Futures Ordinance. It is not intended to be distributed or passed on, directly or indirectly, to any other class of persons. Recipients of this report can contact Canaccord Genuity (Hong Kong) Limited. (Contact Tel: +852 3919 2561) in respect of any matters arising from, or in connection with, this research.

Additional information is available on request.