ĭ H.C.WAINWRIGHT&CO.

Neptune Digital Assets Corp. (NDA.V) Rating: Buy Estimate Changes Crypto

August 3, 2021

Kevin Dede, CFA 415-779-5876 kdede@hcwresearch.com

Early Results Show Proof of Concept; Reiterating Buy Rating

Stock Data		(08/02/2021			
Price			C\$0.57			
Exchange			TSXV			
Price Target			C\$1.00			
52-Week High			C\$2.22			
52-Week Low			C\$0.07			
Enterprise Valu	ie (M)		C\$53			
Market Cap (M)		C\$53			
Shares Outstar	nding (M)		108.8			
3 Month Avg Vo			776			
Short Interest (0.13			
Balance Sheet	t Metrics					
Cash (M)			C\$0.10			
Total Debt (M)			C\$0.00			
Total Cash/Sha			C\$0.00			
General: EPS might i rounding.	not add on accou	int of stock issua	ance and			
EPS (C\$) Dilute	ed					
Full Year - Aug	2020A	2021E	2022E			
1Q	0.00	0.00A				
2Q	0.01	0.03A				
3Q	0.00	(0.06)A				
4Q	0.01	0.01				
FY	0.01	(0.01)	0.05			
Revenue (C\$M		00045	00005			
Full Year - Aug	2020A	2021E	2022E			
1Q	C\$0.0	C\$0.0A				
2Q	C\$0.0	C\$0.0A				
3Q	C\$0.0	C\$0.0A				
4Q	C\$0.1	C\$0.4				
FY	C\$0.1	C\$0.5	C\$7.4			
30 <u>Vol. (mil)</u>			Price 2			
25 -						
20-			1.5			
15		, h	1			
10-		N M	['			
			0.5			
5						
AUG-20	DEC-20	APR-21	0 المدينية من المحينية الم			
AUG-20	DEC-20	AFK-21	JUL-21			

. Mainwrig.

Grabbing the bull by the horns. Neptune Digital announced 3Q21 (May) financial results late last week, losing C\$0.07 per share, down from a C\$0.03 gain in the previous quarter (Feb.). The main driver for the quarterly loss was a sharp decline in the broad cryptocurrency market, in part on account of the Chinese government's crackdown on crypto mining and concerns over the amount of energy crypto mining uses, for example: (1) bitcoin, which accounts for 16.8% of Neptune's crypto portfolio at May guarter's end, reached C\$79,437 on April 15, before tumbling to C\$45,027 on May 31; (2) Cosmos, at 33.8% of the portfolio, hit an all-time high of C\$35.97 on May 7, before closing out the month at C\$16.66; and (3) Ethereum, at 12.3% of the portfolio, hit C\$5,044.53 on May 10 before ending the month at C\$3,183.95. Other cryptocurrencies held by the company experienced similar price declines in April and May, which caused Neptune to record a C\$3.5M unrealized loss on investments and short-term loans. More important to focus on, in our opinion, is Neptune's unfortunately masked bull horn grab in the proofof-concept display of C\$1.6M in interest and staking income. The stake -able tokens within the C\$7.1M digital currency portfolio as of May 31 are locked up for a predetermined period, while also earning interest -collectively earned C\$633,740 reported on the other income line for 3Q21, and up sequentially from C\$94,911 earned in 2Q21. We see an opportunity for investors to participate in broad crypto appreciation and associated income as the company manages a portfolio of diverse cryptocurrencies, as thoroughly discussed in our June 25 note, Early Stage Crypto Mining and Staking Conglomerate Shows Promise; Initial Coverage Buy, Though Risky.

Reiterating bottom-line estimate as our confidence grows in reported and suggested earnings. Apropos of the July 28 press release detailing operation practicality and subsequent increase in confidence regarding management's ability to execute its planned strategy, we are raising our FY22 staking income to C\$3.8M from C \$1.0M, shown in the other income line, as Neptune has repeatedly hit the C\$300,000-400,000 mark in monthly staking revenue and such gains are expected to continue. We see significant potential in the staking space, exemplified by the company's efforts to maintain a low cash balance, at a mere C\$103,000 May 31, as Neptune earns a fraction of 1% in interest, compared to the digital currency portfolio of C\$7.1M, which when staked, earns a blended rate upwards of 5-10%, dependent on the staked coin and period. Additionally, we are raising our bitcoin mining revenue estimate to C\$7.4M from C\$6.3M, driven by: (1) the recent July 7 order for 200 Antminer S19 Pro's producing 22 PH/s that pushes the current hash rate to 37 PH/s, nearly halfway, to the guidance of 75 PH/s by the end of CY21; (2) a depressed network bitcoin hash rate, which is currently at 108.1 EH/s, down from a recent high of 180.6 EH/s on May 13; and (3) a moderate increase to our average bitcoin price forecast. While the company strives to maintain lean operations, we have increased our site operation costs, in an effort to remain conservative, and account for an increase in hash rate and overall power costs. Further and importantly, in our opinion, the May quarter presented proof-of-concept relating to the company's business model, engendering an increase in our confidence in both the business model and management team.

Reiterating Buy rating and C\$1.00 price target. We reiterate our Buy rating, based on three specific views to valuation and our forecast: (1) historical trading range supports a higher stock price, especially based on the increase in bitcoin mining hash rate complemented by Neptune's portfolio of cryptocurrencies now valued at C\$7.1 million, up from C\$5.5 million in 2Q21; (2) our take on the earnings generated by Neptune's staked crypto is in line with the C\$300,000-400,000 monthly earnings Neptune says it saw during the past few months; and (3) a P/E multiple of 20x our FY22 (ends August) C\$0.05 EPS estimate that could prove conservative in light of Neptune's staking returns while yielding a C\$1.00 target. From a diversification perspective, Neptune's shares provide some risk mitigation as viewed against a pure bitcoin mining company, where we actively follow many names; however, its limited operating history is subject to several risks, including insufficient cash accumulation, undercapitalization, inability to generate earnings, and on-availability of financial resources. While running lean operations, the company's financial resources may continue to be deployed for the development of its business and related activities, which, as normal, is expected to be covered by earnings and cash generation going forward. Further, there is no assurance that, in the absence of adequate earnings and cash inflows, Neptune may be able to raise the required funds for its future expansion.

	(C\$ inousanos, except per share data)										
			8/31/2020A					8/31/2021E		Estimate	Estimate
8/3/2021 FY Ending 08/31: NDA-TSE	Q1A <u>11/30</u>	Q2A <u>2/29</u>	Q3A <u>5/31</u>	Q4A <u>8/31</u>	YEAR <u>8/31/2020</u>	Q1A <u>11/30</u>	Q2A <u>2/28</u>	Q3A <u>5/31</u>	Q4E <u>8/31</u>	YEAR 8/31/2021	YEAR 8/31/2022
Revenues	C\$39.4	C\$0.0	C\$0.0	C\$109.7	C\$149.1	C\$29.6	C\$0.0	C\$0.0	C\$442.5	C\$472.1	C\$7,440.4
Site op. costs	2.9	0.0		3.2	6.16	0.38	0.0	0.0	117.7	118.12	2,241.4
Mining profit	36.5	0.0	0.0	106.4	142.91	29.24	0.0	0.0	324.8	354.00	5,199.0
Depreciation Gross profit	0.0 36.5	0.0 0.0	0.0 0.0	0.0 106.4	0.00 142.91	0.00 29.24	0.0 0.0	52.8 (52.8)	398.2 (73.4)	450.97 (97.0)	1,592.8 3.606.1
	00.0	0.0	0.0	100.1	112.01	20.21	0.0	(02.0)	((0.1)	(01.0)	0,000.1
Operating Costs Expenses	107.2	145.9	113.8	171.1	537.99	105.01	191.4	195.6	190.0	681.98	1,000.0
Share-based comp.	53.8	(147.1)	10.4	10.4	(72.4)	10.42	1,290.3	4,289.3	0.0	5,589,96	1,000.0
Operating Inc.	(124.5)	1.2	(124.3)	(75.0)	(322.6)	(86.2)	(1,481.6)	(4,537.6)	(263.4)	(6,368.9)	2,606.1
Other inc.	1.9	40.9	(75.7)	(44.5)	(77.4)	15.63	108.651	633.7	960.7	1.718.68	3,842.7
Unreal.gain-loss	0.0	0.0	0.0	0.0	0.00	370.54	4,376.3	(3,554.1)	0.0	1,192,77	0.0
Dig. curr. chng.	(227.8)	580.7	(202.9)	413.0	562.99	-7.75	283.6	(519.6)	0.0	(243.8)	0.0
Real. gain-loss	0.0	0.0	0.0	0.0	0.00	0.00	0.0	962.4	0.0	962.42	0.0
Total other	(225.9)	621.60	(278.6)	368.53	485.58	378.41	4,768.5	(2,477.5)	960.7	3,630.07	3,842.7
Pretax Income	(350.4)	622.8	(402.9)	293.5	162.95	292.22	3,286.9	(7,015.2)	697.2	(2,738.8)	6,448.8
Тах	0.0		0.0	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.0
Net Income	(350.4)	622.8	(402.9)	293.5	162.95	292.22	3,286.9	(7,015.2)	697.2	(2,738.8)	6,448.8
Reval. of dig. Curr.	0.0	0.0	0.0	494.3	494.30	(0.0)	2,782.0	(827.9)	0.0	1,954.07	0.0
Comp. inc	(350.4)	622.8	(402.9)	787.8	657.25	292.18	6,068.9	(7,843.1)	697.2	(784.8)	6,448.8
IFRS EPS (C\$)	(C\$0.00)	C\$0.01	(C\$0.00)	C\$0.01	C\$0.01	C\$0.00	C\$0.03	(C\$0.06)	C\$0.01	(C\$0.01)	C\$0.05
FD Shares out (K)	80,710.0	80,943.0	83,896.7	85,913.6	82,865.8	85,869.2	94,356.3	108,814.5	123,814.5	103,213.6	130,314.5
MARGIN ANALYSIS											
Gross mining margin	92.5%	n.a.	n.a.	97.1%	95.9%	98.7%	n.a.	n.a.	73.4%	75.0%	69.9%
Gross margin	92.5%	n.a.	n.a.	97.1%	95.9%	98.7%	n.a.	n.a.	-16.6%	-20.5%	48.5%
Op. Exp. % sales	408.3%	n.a.	n.a.	165.5%	312.3%	389.7%	n.a.	n.a.	42.9%	1328.5%	13.4%
Operating margin	-315.8%	n.a.	n.a.	-68.4%	-216.4%	-291.0%	n.a.	n.a.	-59.5%	-1349.0%	35.0%
Pretax margin	-889.0% 0.0%	n.a.	n.a. 0.0%	267.7% 0.0%	109.3% 0.0%	986.7% 0.0%	n.a. 0.0%	n.a. 0.0%	157.6% 0.0%	-580.1% 0.0%	86.7% 0.0%
Tax rate Net margin	-889.0%	n.a. n.a.	n.a.	267.7%	109.3%	986.7%	n.a.	n.a.	157.6%	-580.1%	86.7%
PERCENT CHANGE Total revenue	-43.0%	-100.0%	-100.0%	108.5%	-26.3%	-24.9%			202.6%	216.7%	1475.9%
Cost of site ops	-43.0% n.a.	-100.0%	-100.0%	47.3%	-26.3% -39.7%	-24.9% -87.1%	n.a. n.a.	n.a. n.a.	303.6% 3566.7%	1818.5%	1797.6%
	-47.3%	-100.0%	-100.0%	47.3%	-25.6%	-07.1%			205.1%		1368.6%
Mining profit Gross profit	-47.3% -47.3%	-100.0% -100.0%	-100.0%	111.1%	-25.6% -25.6%	-19.8% -19.8%	n.a. n.a.	n.a. n.a.	-169.0%	147.7% -167.8%	-3818.9%
Operating profit	-47.3% -48.7%	-100.0%	-100.0%	-41.2%	-25.6%	-30.8%	n.a. n.a.	n.a. 3551.7%	-169.0%	-167.8% 1874.0%	-3818.9%
Net Income	-40.7%	-211.3%	-118.7%	-41.2%	-103.7%	-183.4%	427.8%	1641.3%	137.6%	-1780.8%	-335.5%
Share Count	-09.9%	-211.3%	-116.7%	6.4%	-103.7%	-103.4%	427.6%	29.7%	44.1%	-1780.8%	-335.5% 26.3%
EPS	-90.0%	-210.6%	-118.0%	-129.9%	-114.7%	-178.4%	352.8%	1242.5%	-38.6%	-195.9%	-750.9%
Sequential Sales Growth	-25.0%	-100.0%	n.a.	n.a.	36.0%	-73.0%	-100.0%	n.a.	n.a.		
Source: Co. reports and H.C.W. estimates.											

Quarterly Earnings Model (C\$ thousands, except per share data)

Balance Sheet							
(C\$'s Thousands)		8/31/2020A		8/31/2021E			
	Q1A	Q2A	Q3A	Q4A	Q1A	Q2A	Q3A
	<u>11/30</u>	2/29	5/31	<u>8/31</u>	<u>11/30</u>	2/28	5/31
Current Assets							
Cash	403.0	346.9	291.8	117.6	43.5	129.9	103.0
Accounts rec. and prepaid exp.	57.2	64.0	69.0	77.9	108.0	88.8	172.5
Digital currencies	173.3	290.9	392.3	121.8	0.0	0.0	0.0
Loan rec.	0.0	0.0	0.0	765.6	1,281.8	4,029.7	36,708.7
Short-term investments	0.0	0.0	0.0	392.1	248.2	2,375.4	1,828.1
Total Current Assets	633.5	701.8	753.1	1,475.0	1,681.5	6,623.8	38,812.3
Property, plant and equip.	0.0	0.0	0.0	0.0	0.0	0.0	1,213.5
Digital currencies	1,841.3	2,344.2	2,123.2	2,324.0	2,435.4	5,485.6	7,110.7
Total Assets	C\$2,474.7	C\$3,045.9	C\$2,876.2	C\$3,799.0	C\$4,116.9	C\$12,109.4	C\$47,136.5
Accounts payable	135.7	231.3	153.4	233.8	294.6	300.5	67.3
Loans payable	100.0	100.0	0.0	0.0	0.0	0.0	905.4
Accrued liabilities	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LT debt	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Liabilities	235.7	331.3	153.4	233.8	294.6	300.5	972.7
Total equity	2,239.0	2,714.7	2,722.8	3,565.1	3,822.4	11,808.9	46,163.9
Total Liab. & Equity	C\$2,474.7	C\$3,045.9	C\$2,876.2	C\$3,799.0	C\$4,116.9	C\$12,109.4	C\$47,136.5
Cash & marketable securities	C\$403.0	C\$346.9	C\$291.8	C\$117.6	C\$43.5	C\$129.9	C\$103.0
Change in cash (QoQ):	(107.0)	(56.2)	(55.1)	(174.2)	(74.1)	\$86.5	(27.0)
Cash per share	C\$0.0	C\$0.0	C\$0.0	C\$0.0	C\$0.0	C\$0.0	C\$0.0
Tot digital asset	C\$2,014.5	C\$2,635.1	C\$2,515.5	C\$2,445.7	C\$2,435.4	C\$5,485.6	C\$7,110.7
Change in digital asset (QoQ):		620.6	(119.6)	(69.7)	(10.3)	3,050.1	1,625.2
Debt	100.0	100.0	0.0	0.0	0.0	0.0	905.4

Source: Company reports.

3Q21 Income Statement Comparison

8/3/2021 FY Ending 08/31: NDA-TSE	Actual Q3A <u>5/31</u>	H.C.W. Estimate Q3E <u>5/31</u>	Prior Quarter Q2A <u>2/28</u>	Prior Year Q3A <u>5/31</u>
Revenues	\$0.0	\$128.6	\$0.0	\$0.0
Site op. costs	0.0	18.7	0.0	
Mining profit	0.0	109.9	0.0	0.0
Depreciation Gross profit	52.8 (52.8)	0.3 109.6	0.0 0.0	0.0 0.0
Operating Costs				
Expenses	195.6	190.0	191.4	113.8
Share-based comp.	4,289.3	0.0	1,290.3	10.4
Operating Inc.	(4,537.6)	(80.4)	(1,481.6)	(124.3)
Other inc.	633.7	167.4	108.7	(75.7)
Unreal. gain-loss	(3,554.1)	0.0	4,376.3	0.0
Dig. curr. chng.	(519.6)	0.0	283.6	(202.9)
Real. gain-loss	962.4	407.4	1 700 5	(070.0)
Total other	(2,477.5)	167.4	4,768.5	(278.6)
Pretax Income	(7,015.2)	87.0	3,286.9	(402.9)
Tax	0.0	0.0	0.0	0.0
Net Income	(7,015.2)	87.0	3,286.9	(402.9)
Reval. of dig. Curr.	(827.9)	0.0	2,782.0	0.0
Comp. inc	(7,843.1)	87.0	6,068.9	(402.9)
IFRS EPS (C\$)	(\$0.07)	\$0.00	\$0.03	(\$0.00)
FD Shares out (K)	108,814.5	97,048.9	94,356.3	83,896.7
MARGIN ANALYSIS				
Gross mining margin	n.a.	85.5%	n.a.	n.a.
Gross margin	n.a.	85.2%	n.a.	n.a.
Op. Exp. % sales	n.a.	147.8%	n.a.	n.a.
Operating margin				
Pretax margin	n.a.	-62.5%	n.a.	n.a.
	n.a.	67.7%	n.a.	n.a.
Tax rate	n.a. 0.0%	<mark>67.7%</mark> 0.0%	n.a. n.a.	n.a. 0.0%
	n.a.	67.7%	n.a.	n.a.
Tax rate	n.a. 0.0%	<mark>67.7%</mark> 0.0%	n.a. n.a.	n.a. 0.0%
Tax rate Net margin	n.a. 0.0%	<mark>67.7%</mark> 0.0%	n.a. n.a.	n.a. 0.0%
Tax rate Net margin <u>PERCENT CHANGE</u>	n.a. 0.0% n.a.	67.7% 0.0% 67.7%	n.a. n.a. n.a.	n.a. 0.0% n.a.
Tax rate Net margin PERCENT CHANGE Total revenue	n.a. 0.0% n.a. n.a.	67.7% 0.0% 67.7% 262.8% n.a. 210.1%	n.a. n.a. n.a. n.a.	n.a. 0.0% n.a. -100.0% -100.0% -100.0%
Tax rate Net margin PERCENT CHANGE Total revenue Cost of site ops Mining profit Gross profit	n.a. 0.0% n.a. n.a. n.a. n.a. n.a.	67.7% 0.0% 67.7% 262.8% n.a. 210.1% 209.2%	n.a. n.a. n.a. n.a. n.a.	n.a. 0.0% n.a. -100.0% -100.0% -100.0% -100.0%
Tax rate Net margin <u>PERCENT CHANGE</u> Total revenue Cost of site ops Mining profit Gross profit Operating profit	n.a. 0.0% n.a. n.a. n.a. n.a. 3551.7%	67.7% 0.0% 67.7% 262.8% n.a. 210.1% 209.2% 2.6%	n.a. n.a. n.a. n.a. n.a. n.a. n.a. n.a.	n.a. 0.0% n.a. -100.0% -100.0% -100.0% -37.1%
Tax rate Net margin PERCENT CHANGE Total revenue Cost of site ops Mining profit Gross profit Operating profit Net Income	n.a. 0.0% n.a. n.a. n.a. n.a. 3551.7% 1641.3%	67.7% 0.0% 67.7% 262.8% n.a. 210.1% 209.2% 2.6% -146.0%	n.a. n.a. n.a. n.a. n.a. n.a. n.a. 427.8%	n.a. 0.0% n.a. -100.0% -100.0% -100.0% -37.1% -118.7%
Tax rate Net margin PERCENT CHANGE Total revenue Cost of site ops Mining profit Gross profit Operating profit Net Income Share Count	n.a. 0.0% n.a. n.a. n.a. n.a. 3551.7% 1641.3% 29.7%	67.7% 0.0% 67.7% 262.8% n.a. 210.1% 209.2% 2.6% -146.0% 15.7%	n.a. n.a. n.a. n.a. n.a. n.a. n.a. 427.8% 16.6%	n.a. 0.0% n.a. -100.0% -100.0% -100.0% -37.1% -118.7% 3.9%
Tax rate Net margin PERCENT CHANGE Total revenue Cost of site ops Mining profit Gross profit Operating profit Net Income	n.a. 0.0% n.a. n.a. n.a. n.a. 3551.7% 1641.3%	67.7% 0.0% 67.7% 262.8% n.a. 210.1% 209.2% 2.6% -146.0%	n.a. n.a. n.a. n.a. n.a. n.a. n.a. 427.8%	n.a. 0.0% n.a. -100.0% -100.0% -100.0% -37.1% -118.7%

Source: Co. reports and H.C.W. estimates.

Important Disclaimers

This material is confidential and intended for use by Institutional Accounts as defined in FINRA Rule 4512(c). It may also be privileged or otherwise protected by work product immunity or other legal rules. If you have received it by mistake, please let us know by e-mail reply to unsubscribe@hcwresearch.com and delete it from your system; you may not copy this message or disclose its contents to anyone. The integrity and security of this message cannot be guaranteed on the Internet.

H.C. WAINWRIGHT & CO, LLC RATING SYSTEM: H.C. Wainwright employs a three tier rating system for evaluating both the potential return and risk associated with owning common equity shares of rated firms. The expected return of any given equity is measured on a RELATIVE basis of other companies in the same sector. The price objective is calculated to estimate the potential movements in price that a given equity could reach provided certain targets are met over a defined time horizon. Price objectives are subject to external factors including industry events and market volatility.

RETURN ASSESSMENT

Market Outperform (Buy): The common stock of the company is expected to outperform a passive index comprised of all the common stock of companies within the same sector.

Market Perform (Neutral): The common stock of the company is expected to mimic the performance of a passive index comprised of all the common stock of companies within the same sector.

Market Underperform (Sell): The common stock of the company is expected to underperform a passive index comprised of all the common stock of companies within the same sector.



Investment Banking Services include, but are not limited to, acting as a manager/co-manager in the underwriting or placement of securities, acting as financial advisor, and/or providing corporate finance or capital markets-related services to a company or one of its affiliates or subsidiaries within the past 12 months.

Distribution of Ratings Table as of August 2, 2021							
IB Service/Past 12 Months							
Ratings	Count	Percent	Count	Percent			
Buy	508	90.07%	193	37.99%			
Neutral	51	9.04%	15	29.41%			
Sell	1	0.18%	0	0.00%			
Under Review	4	0.71%	1	25.00%			

H.C. Wainwright & Co, LLC (the "Firm") is a member of FINRA and SIPC and a registered U.S. Broker-Dealer.

I, Kevin Dede, CFA, certify that 1) all of the views expressed in this report accurately reflect my personal views about any and all subject securities or issuers discussed; and 2) no part of my compensation was, is, or will be directly or indirectly related to the specific recommendation or views expressed in this research report; and 3) neither myself nor any members of my household is an officer, director or advisory board member of these companies.

None of the research analysts or the research analyst's household has a financial interest in the securities of Neptune Digital Assets Corp. (including, without limitation, any option, right, warrant, future, long or short position).

As of July 31, 2021 neither the Firm nor its affiliates beneficially own 1% or more of any class of common equity securities of Neptune Digital Assets Corp..

Neither the research analyst nor the Firm knows or has reason to know of any other material conflict of interest at the time of publication of this research report.

The research analyst principally responsible for preparation of the report does not receive compensation that is based upon any specific investment banking services or transaction but is compensated based on factors including total revenue and profitability of the Firm, a substantial portion of which is derived from investment banking services.

The Firm or its affiliates did receive compensation from Neptune Digital Assets Corp. for investment banking services within twelve months before, and will seek compensation from the companies mentioned in this report for investment banking services within three months following publication of the research report.

H.C. Wainwright & Co., LLC managed or co-managed a public offering of securities for Neptune Digital Assets Corp. during the past 12 months.

The Firm does not make a market in Neptune Digital Assets Corp. as of the date of this research report.

The securities of the company discussed in this report may be unsuitable for investors depending on their specific investment objectives and financial position. Past performance is no guarantee of future results. This report is offered for informational purposes only, and does not constitute an offer or solicitation to buy or sell any securities discussed herein in any jurisdiction where such would be prohibited. This research report is not intended to provide tax advice or to be used to provide tax advice to any person. Electronic versions of H.C. Wainwright & Co., LLC research reports are made available to all clients simultaneously. No part of this report may be reproduced in any form without the expressed permission of H.C. Wainwright & Co., LLC. Additional information available upon request.

H.C. Wainwright & Co., LLC does not provide individually tailored investment advice in research reports. This research report is not intended to provide personal investment advice and it does not take into account the specific investment objectives, financial situation and the particular needs of any specific person. Investors should seek financial advice regarding the appropriateness of investing in financial instruments and implementing investment strategies discussed or recommended in this research report.

H.C. Wainwright & Co., LLC's and its affiliates' salespeople, traders, and other professionals may provide oral or written market commentary or trading strategies that reflect opinions that are contrary to the opinions expressed in this research report.

H.C. Wainwright & Co., LLC and its affiliates, officers, directors, and employees, excluding its analysts, will from time to time have long or short positions in, act as principal in, and buy or sell, the securities or derivatives (including options and warrants) thereof of covered companies referred to in this research report.

The information contained herein is based on sources which we believe to be reliable but is not guaranteed by us as being accurate and does not purport to be a complete statement or summary of the available data on the company, industry or security discussed in the report. All opinions and estimates included in this report constitute the analyst's judgment as of the date of this report and are subject to change without notice.

Securities and other financial instruments discussed in this research report: may lose value; are not insured by the Federal Deposit Insurance Corporation; and are subject to investment risks, including possible loss of the principal amount invested.