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## Byrna Technologies Inc. (NASDAQ: BYRN)

April 26, 2022

### Buy: Initiating with Buy Recommendation, \$12 Target.

We initiate coverage of Byrna Technologies, Inc. with a Buy recommendation and \$12 price target. Byrna has developed a suite of non-lethal security devices for consumer, private security and law-enforcement markets. Recent results have been negatively impacted by supply-chain issues, however, we expect an acceleration in revenue growth in the second half of this year, accompanied by margin improvement and believe these can lead to multiple expansion.

Byrna Technologies has developed a line of handheld personal security devices, with the look and feel of a handgun, but the device fires, powered by CO2, non-lethal kinetic and pepper ball rounds. Because the Byrna launchers do not use gunpowder or explosives to propel the projectiles it is not classified as a firearm and faces far fewer regulatory burdens than handgun manufactures. The company also offers a shoulder-fired device, also powered by CO2 and firing similar type rounds as its handheld device. An active and aggressive R&D and acquisition strategy has expanded the company's line of launchers, projectiles, and accessories.

The company is benefitting from the demand for personal safety but is unique in offering a non-lethal option not subject to firearm regulations. In our view consumers' demand for increased personal safety devices was caused by the pandemic, violent demonstrations increasing in 2020, increased crime in major cities and the 'defund the police' movement. We believe this backdrop has propelled Byrna's success thus far despite a relatively thin product line, marketing and distribution. As the company's product line, marketing and channel increases, we expect sales to accelerate.

To date, most of the company's sales were to the domestic consumer market from its e-commerce website. However, the company's products are now available on Amazon.com and availability at brick-and-mortar stores and in international markets is increasing. We expect expanded distribution to be a key component of the company's growth in the coming years.

We expect recent actions to result in an easing of the negative impact on the company's revenue growth and margins from the disruption to the global supply chain brought about by the pandemic. Byrna has invested in domestic manufacturing capacity and inventory in order to better satisfy demand for the company's existing products and to meet expected demand for new products and from new distribution outlets.

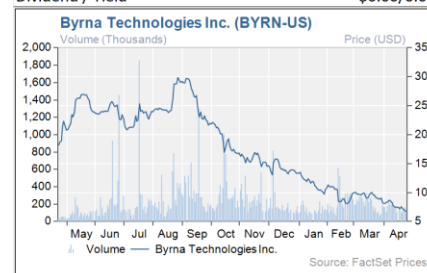
We expect revenue to increase this fiscal year to \$54 million, up 28% over fiscal 2021 and we forecast 40% growth in fiscal 2023, to \$76 million. We believe \$100 million in revenue is achievable in fiscal 2024/25. We expect faster growth in EBITDA with improvements in mix, lower shipping costs and better manufacturing efficiency. We estimate the company will exit this year with EBITDA margins exceeding 20%.

### Valuation & Risks

Our price target of \$12 assumes an EV/Sales multiple of 3x on our fiscal 2023 revenue estimate of \$76 million. Risks to achieving our target includes slower growth from higher interest rates, continuing supply chain disruptions, changes in regulations to the personal safety and firearm industry and changes in consumer demand for personal safety devices.

### Investment Highlights

Current Price	\$6.82		
Price Target	\$12.00		
Estimates	F2021A	F2022E	F2023E
Revenues (\$000s)	\$ 42,160	\$ 53,977 E	\$ 76,000
1Q February	\$ 8,893	\$ 7,977 E	\$ 15,000
2Q May	\$ 13,401	\$ 12,000 E	\$ 18,000
3Q August	\$ 8,703	\$ 15,000 E	\$ 20,000
4Q November	\$ 11,163	\$ 19,000 E	\$ 23,000
	F2021A	F2022E	F2023E
EBITDA (\$000s)	\$ 1,646	\$ 3,275 E	\$ 15,031
1Q February	\$ 370	\$ (2,376)E	\$ 1,422
2Q May	\$ 3,005	\$ (93)E	\$ 3,230
3Q August	\$ (687)	\$ 1,797 E	\$ 4,440
4Q November	\$ (1,042)	\$ 3,947 E	\$ 5,940
EV/Sales	NM	2.1 x	1.5 x
EV/EBITDA	NM	34.5 x	7.5 x
Stock Data			
52-Week Range	\$6.65	-	\$30.55
Shares Outstanding (mil.)	22.9		
Market Capitalization (mil.)	\$156		
Enterprise Value (mil.)	\$113		
Debt to Capital	0%		
Cash & Equivalents (mil.)	\$44.7		
Cash/Sh.	\$1.95		
Average Three Months Trading Volume (K)	121		
Insider Ownership	21.8%		
Institutional Ownership	27.9%		
Short interest (mil.)	4.9%		
Dividend / Yield	\$0.00/0.0%		



## Overview

In 2019 Byrna introduced the Byrna HD, a handheld personal security device that, powered by CO<sub>2</sub>, fires kinetic and pepper ball rounds. Although the device has the look and feel of a handgun, it is not a firearm because it uses CO<sub>2</sub>, and not gunpowder or an explosive, to propel the projectiles. Total sales grew from less than \$1 million in fiscal 2019 to over \$16 million in fiscal 2020, partly on the mention and endorsement of the product on the Sean Hannity show in June of 2020. Sales continued to grow in 2021, to over \$42 million as the company increased its marketing, added brick-and-mortar distribution partners, added Amazon.com as an outlet, increased international sales, expanded its product line for the consumer market and introduced products and began a greater emphasis on the law enforcement market. In 2021 the company acquired the assets of Mission Less Lethal, a leading supplier of .68 caliber, shoulder-fired, non-lethal launchers for the law enforcement and professional security markets and the assets of Ballistipax, a developer of bulletproof backpacks designed for protection in active shooter situations.

The company's product line of launchers now includes the Byrna SD, the successor to the original HD, the SD XL, which features a longer barrel, and greater muzzle velocity than the SD, and the shoulder-fired Mission-4, based on technology acquired in the Mission Less Lethal acquisition. The Byrna SD starter kit (including CO<sub>2</sub> canisters and ammo) is priced at \$350, the SD XL starter kit at \$460, and the Mission-4 starter bundle at \$900. Byrna also supplies a line of projectiles including OC/CS pepper ball projectiles, OC/PAVA pepper ball projectiles, kinetic rounds made of hard solid plastic to deter, discourage and delay attackers, eco-kinetic water-soluble rounds for practice and training and training rounds filled with inert powder. There is also a growing line of accessories including a variety of Ballistipac backpacks, holsters, a safety alarm and apparel.

Byrna has an active and aggressive internal product development program and acquisition strategy. We expect the company, this year, will introduce the TCR (Tactical Compact Rifle), a should-fired launcher, developed by Mission Less Lethal, the Byrna LE with a 7-round magazine, fiber-optic sights, and a regulator for cold-weather performance, and designed for the law enforcement market, and 12-gauge rounds utilizing the company's fintail projectile and targeted to the 100 million shotguns in the U.S. We also believe the company will continue filling out its product offering with acquisitions, and we believe the company's cessation of its stock buyback plan is a result of opportunities currently available.

Manufacturing occurs in South Africa and at a Ft. Wayne Indiana plant that opened in 2020. The pandemic has caused major disruptions to the company's manufacturing, resulting in product launch delays, deferred orders, revenue shortfalls and margin compression. To counter these effects Byrna has increased capacity at its Ft. Wayne facility, hardened its supply chain with additional suppliers and invested in inventory to enable supply of end-products should supply chain disruptions continue.

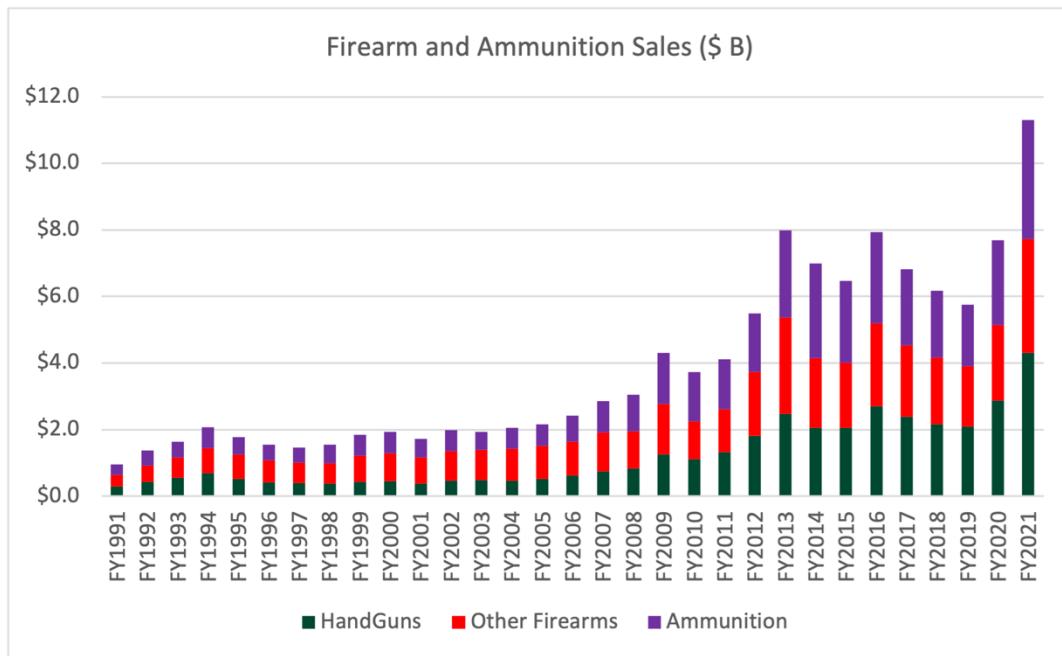
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The shares peaked in September 2021, at \$30 per share, and a market cap exceed \$700 million. However, the overall decline in the market, partially driven by a change in monetary policy by the Federal Reserve, and a decline in the overall personal security market has resulted in a decline in the shares to their current price of \$6.82. We believe this is an attractive entry point and initiate coverage with a Buy recommendation and \$12 price target.

## Firearms and Law Enforcement Market

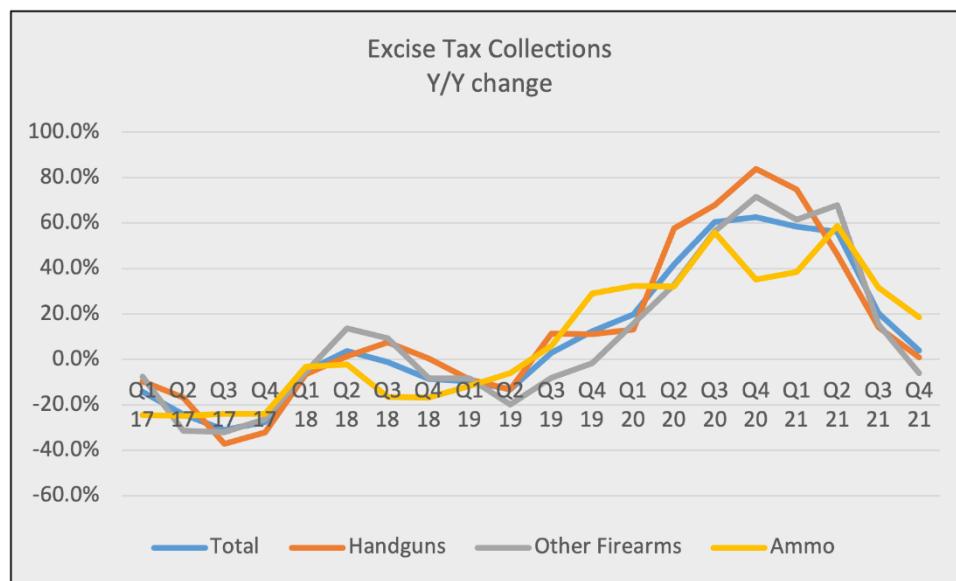
Using excise tax data from the U.S. Treasury's Alcohol and Tobacco Tax and Trade Bureau, domestic sales (at wholesale) of handguns, firearms and ammunition exceeded \$11.3 billion in the Federal Government's fiscal year ending September 2021. Sales grew at a compound annual rate of 5.7% during the George W. Bush presidency, a 12.7% rate during the Obama presidency and declined at a 0.8% rate during the Trump presidency, although sales spiked in 2020 during the pandemic and amid widespread riots across the United States.

We believe sales accelerated during the Obama years as greater restrictions on gun ownership were proposed and with the Supreme Court's McDonald and Heller decisions which protected an individual's right to ownership of firearms. In the recent past we believe the Republican party has become more supportive of the right to own firearms while the Democratic party has embraced a position of greater restrictions on firearm ownership. The result, in our view, is an increase in sales when the Democratic party has greater power, as consumers fear policies that will lead to restrictions on purchase, and a diminution in growth when the Republican party has greater power. The spike in sales in 2021 is consistent with this thesis and the current prediction of Republican gains in the U.S. House and possibly the Senate suggests growth could continue to abate.



Source: TTB, Dawson James.

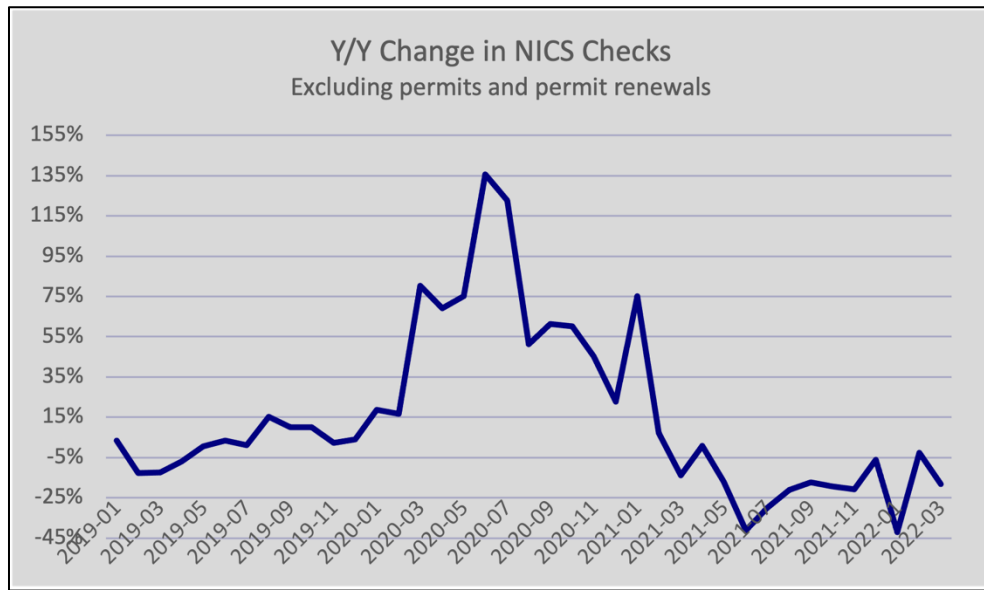
While sales in the government's fiscal 2021 were record highs, the growth rate in sales peaked in calendar Q4 2020 and the rate of growth declined in each subsequent quarter through calendar Q4 of 2021. Comps in 2022 will be very difficult versus the spike in sales in 2021 and a potential change in party control in one or both houses of Congress could diminish demand while the Supreme Court's upcoming decision in *New York State Rifle & Pistol Association, Inc. v. Bruen* (regarding a law limiting concealed carry) could also have an impact on demand.



Source U.S. Treasury, Alcohol and Tobacco Tax and Trade Bureau, <https://www.ttb.gov/foia/electronic-reading-room>.

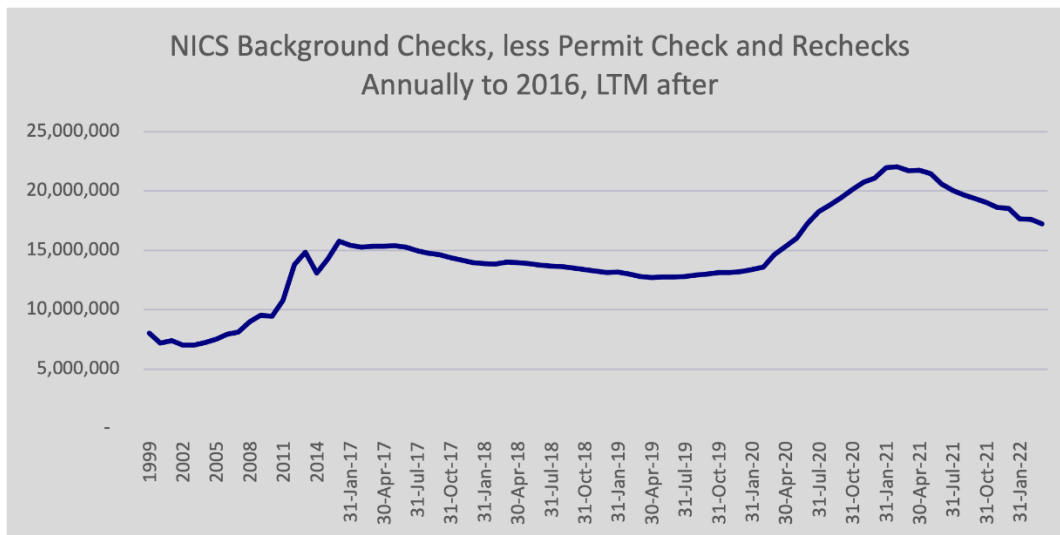
Recent data from the National Instant Criminal Background Check System (NICS) also shows demand slowing. The Brady Handgun Violence Prevention Act of 1993 requires the FBI to check whether prospective firearms or explosives buyers' names and birth years match entries in federal databases of 1) criminal histories in the Interstate Identification Index (III); 2) wanted persons, subjects of protection orders, and other persons who may pose a threat to officer and public safety in the National Crime Information Center (NCIC) database; 3) persons prohibited from possessing or receiving a firearm in the NICS Indices; and 4) non-U.S. citizens attempting to receive firearms. Total NICS checks include requests for permits and permit renewals, and excluding these two categories, or adjusted NICS checks, provides a proxy for gun purchases in the U.S.

Adjusted NICS checks accelerated beginning March of 2020 and the year-over-year growth rate peaked in June of 2020 at 136%. Since then, the rate of change has declined, and turned negative in March 2021. The year-over-year change in adjusted NICS checks were negative in all but one of the thirteen subsequent months.



Source: "NICS Firearm Background Checks: Month and Year by State and Type,"  
[www.fbi.gov/services/cjis/nics](http://www.fbi.gov/services/cjis/nics)

From 1999 through 2008, background checks (less permits and renewals) increased at a 1.3% compound annual rate. From 2008 through 2016, checks grew at a 7.3% compound annual rate. From the end of 2016 through 2019, the number of checks fell at a 5.8% annual rate. For 2020, background checks (excluding permits and renewals) were 21.1 million, 60% higher than the 13.2 million checks processed in 2019. In 2021, adjusted checks were 18.5 million, down 12% versus the adjusted checks in 2020 and down from the peak level of a 22.0 million annualized rate achieved in January 2021.



Source: "NICS Firearm Background Checks: Month and Year by State and Type,"  
[www.fbi.gov/services/cjis/nics](http://www.fbi.gov/services/cjis/nics)

The decline in NICS checks is broad-based. Within the continental United States, adjusted checks for the three months ending March 2022 were down in almost every state. Iowa was the only state with an increase in adjusted NICS background checks in March.

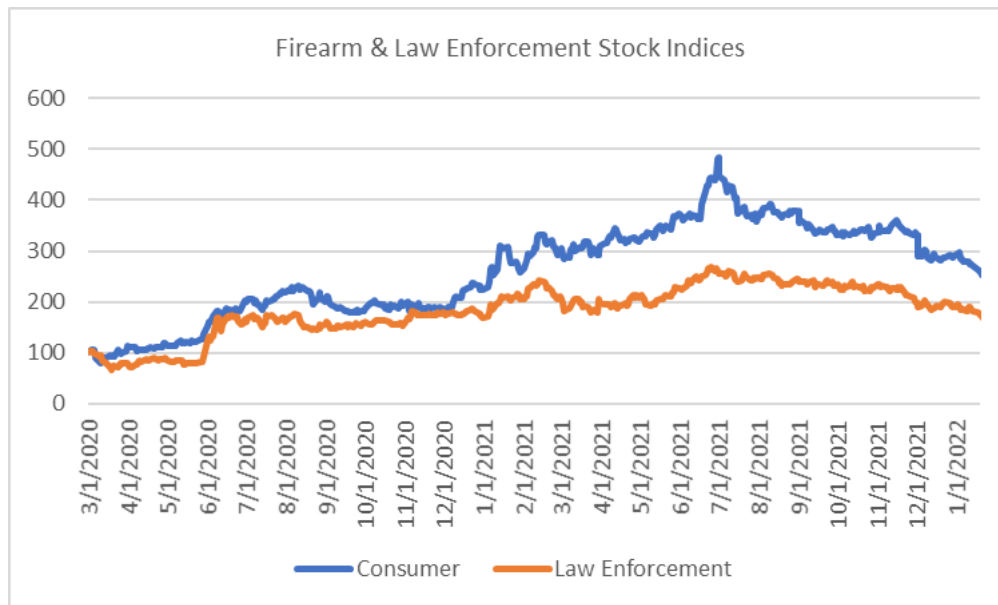
**NICS Background Checks (excluding new and renewal permits)  
by State and Territory**

State/Territory	3 Mos. Ending Mar 2021	3 Mos. Ending Mar 2022	Change	Percent Change	State/Territory	3 Mos. Ending Mar 2021	3 Mos. Ending Mar 2022	Change	Percent Change
Iowa	12,074	19,862	7,788	65%	Oklahoma	116,067	87,639	(28,428)	-24%
Mariana Islands	72	103	31	43%	New York	115,255	87,003	(28,252)	-25%
District of Columbia	1,223	1,733	510	42%	Montana	40,855	30,753	(10,102)	-25%
Puerto Rico	14,191	19,929	5,738	40%	Kentucky	107,992	80,936	(27,056)	-25%
Connecticut	37,347	36,163	(1,184)	-3%	Virginia	191,849	143,572	(48,277)	-25%
Virgin Islands	176	158	(18)	-10%	Vermont	15,795	11,778	(4,017)	-25%
Guam	1,009	901	(108)	-11%	Colorado	150,865	112,363	(38,502)	-26%
Washington	152,532	135,914	(16,618)	-11%	Kansas	64,443	47,418	(17,025)	-26%
Texas	418,107	363,310	(54,797)	-13%	Maryland	61,102	44,853	(16,249)	-27%
Wisconsin	139,060	114,979	(24,081)	-17%	North Carolina	90,239	66,238	(24,001)	-27%
California	313,867	257,430	(56,437)	-18%	Pennsylvania	300,929	219,455	(81,474)	-27%
Hawaii	11	9	(2)	-18%	Maine	34,842	25,385	(9,457)	-27%
Mississippi	83,805	67,636	(16,169)	-19%	Minnesota	107,258	77,608	(29,650)	-28%
Louisiana	101,813	81,853	(19,960)	-20%	Utah	49,054	35,475	(13,579)	-28%
Oregon	103,997	82,136	(21,861)	-21%	Delaware	18,962	13,696	(5,266)	-28%
Illinois	146,621	115,056	(31,565)	-22%	Alaska	25,022	17,992	(7,030)	-28%
Arizona	140,261	109,641	(30,620)	-22%	South Carolina	98,442	70,519	(27,923)	-28%
New Mexico	55,230	42,907	(12,323)	-22%	Ohio	201,348	144,065	(57,283)	-28%
Nebraska	8,629	6,663	(1,966)	-23%	North Dakota	21,985	15,620	(6,365)	-29%
<b>Totals</b>	<b>5,483,342</b>	<b>4,212,539</b>	<b>(1,270,803)</b>	<b>-23%</b>	West Virginia	60,802	43,191	(17,611)	-29%
Tennessee	202,194	155,317	(46,877)	-23%	Idaho	58,210	41,321	(16,889)	-29%
Florida	407,091	311,344	(95,747)	-24%	Wyoming	22,889	16,118	(6,771)	-30%
Massachusetts	43,971	33,504	(10,467)	-24%	Georgia	148,893	104,696	(44,197)	-30%
Indiana	171,589	130,625	(40,964)	-24%	New Hampshire	44,043	30,942	(13,101)	-30%
Missouri	179,377	135,777	(43,600)	-24%	Michigan	200,166	136,649	(63,517)	-32%
Alabama	171,370	129,590	(41,780)	-24%	South Dakota	31,228	19,412	(11,816)	-38%
Nevada	42,294	31,968	(10,326)	-24%	New Jersey	73,035	42,926	(30,109)	-41%
Arkansas	69,716	52,676	(17,040)	-24%	Rhode Island	14,145	7,732	(6,413)	-45%

Source: "NICS Firearm Background Checks: Month and Year by State and Type,"  
[www.fbi.gov/services/cjis/nics](http://www.fbi.gov/services/cjis/nics)

We have created two indices to capture the share performance of firearm/self-defense and accessory companies primarily serving 1) the consumer market: American Outdoor Brands, Ammo, Inc., Byrna, Smith & Wesson Brands, Sturm, Ruger & Company, Inc. and 2) those primarily serving the law enforcement market: Axon, Digital Ally, ShotSpotter, VirTra and Wrap Technologies.

The indices are equal-weighted, chain-linked and begin in March of 2020, about the start of the pandemic. From March 2020 to their respective peaks in June 2021 the consumer index increased over 640%, much of the increase due to the increase in Byrna. Excluding Byrna from the group, the consumer index would have increased over 380%. The law enforcement index increased 167%. The index of the consumer group has declined 50% since its peak versus a 40% decline for the law enforcement index from its peak.



Source: Factset

**Byrna Product Line**

Byrna has developed a line of handheld and shoulder-fired launchers, powered by CO2 cartridges, which fire .68 caliber spherical kinetic and chemical irritant projectiles. These security devices are designed to disable a threat from a standoff distance of up to 60 feet, are non-lethal and because they do not use an explosive charge as a propellant, are not classified as a firearm and do not require a background check or firearms license to purchase. The devices are designed for use by consumers, professional security and law enforcement agencies.



The company's flagship product through mid 2021 was the Byrna HD and was updated and improved by the introduction of the Byrna SD (Self Defense) in August 2021. The handheld launcher has more than 60 custom designed parts, an easily reloadable magazine that holds five (soon to be seven) 0.68 caliber kinetic or pepper spray projectiles and is a non-lethal alternative to firearms. The Byrna SD has an effective range of 60 feet and recommended maximum ranges of 10 feet for pepper spray projectiles and 20 feet for kinetic rounds. A variation of the SD, the SD XL, is also available, and features a longer barrel and greater muzzle velocity.

The SD starter kit is priced at \$399.99, is available in gray, black, orange, tan, yellow and pink, and comes with two 8-Gram CO2 cartridges, 2 5-round magazines, and three five-round projectile tubes.



*Source: Byrna.com*

The SD XL, priced at \$459.99, is available in black and orange and also comes with two 8-Gram CO2 cartridges, 2 5-round magazines, and three five-round projectile tubes.

In May 2021 Byrna acquired the assets of Mission Less Lethal from Kore (US) Outdoor Inc. for \$3.7 million. Mission Less Lethal manufactured .68 caliber, shoulder-fired non-lethal launchers for domestic and international law enforcement and security professionals. The company re-engineered the Mission 4 rifle and offers a bundle that includes the launcher, 2 19-round coupled magazines, an accessory kit, 2 twin packs of 88g CO2 cartridges (4 cartridges total) and 2 95-count of kinetic rounds for \$899.99



*Source: Byrna.com*

The company sells a variety of rounds for the handheld and shoulder-fired launchers

				
<b>MAX</b>	<b>PEPPER</b>	<b>KINETIC</b>	<b>ECO-KINETIC</b>	<b>PRO-TRAINING</b>
Our most powerful chemical blend: OC and CS all in one shot.	One of the most powerful all natural real pepper projectiles on the market.	Hard plastic projectiles that can be used for self-defense and practice.	100% water soluble training and recreational projectiles.	Filled with inert powder, these are the perfect projectiles to simulate our chemical rounds.
95 Count	25 Count	95 Count	95 Count	95 Count
\$139.99	\$119.99	\$54.99	\$39.99	\$79.99
\$1.47/round	\$4.80/round	\$0.58/round	\$0.42/round	\$0.84/round

Source: Byrna.com

We believe projectile margins can be well above the company's average and reducing freight costs will be a key component of margin improvement in the coming quarters. The company has indicated certain rounds cost "several" pennies to produce but it paid upwards of \$0.15 per round in 2021 to ship. The company is shifting production to the U.S. and utilizing ground shipping, instead of air shipping as two of the ways to address supply chain issues that have negatively impacted sales and margins. Even if "several" pennies to produce is more like a dime and it applies to the lowest cost product, the eco-kinetic round with an ASP of \$0.42 per round, gross margin would exceed 75%.

Ammunition sales have been about 25% of total sales recently and could become a larger portion of the total as the installed base of launchers increases. The company has stated ammunition sales can be as large as the initial sale of the launcher in the first 18 months of ownership. The introduction of the eco-kinetic round is an important part of the company's strategy as its low-cost, and low-waste profile could encourage more practice, greater sales of ammunition, greater satisfaction with the product and thus resulting in higher margins.

### Upcoming Product Introductions

Key to the company's guidance of \$55 to \$60 million in sales in fiscal 2022 is the introduction of the TCR, the LE and the 12-gauge round. The LE and the 12-gauge round, in particular, are critical to meeting the company's guidance and our projections.



Source: Byrna Analyst Meeting September 9, 2021

The TCR, a result of the Mission Less Lethal acquisition, is a 12-round, with a 7-round backup, shoulder-fired launcher, powered by a 12g CO2 canister. It fires at greater than 300 feet per second. The company has indicated the retail price, for consumers is about \$700.

In December of 2021, Byrna received a \$200,000 order to provide 200 units to the Spokane County Sheriff's Office patrol division, SWAT Team, and their TAC Unit. The Sheriff's office intends to place a TCR in every patrol car and a use case of "managing instances of civil disorder."

We expect the Byrna LE to begin shipping in the company's fiscal Q3. The LE, has been designed specifically designed to meet the requirements of the law enforcement market and will be faster, more accurate and have greater stopping power than the Byrna SD. The LE will be produced exclusively in the United States, mitigating some of the supply chain issues Byrna has faced with other products.

We have modeled introduction of the 12-gauge projectile in late Q3 or early Q4. This projectile utilizes the company's helix fintail design and will be marketed to the owners of 100 million shotguns in the United States.



Source: Byrna Analyst Meeting September 9, 2021

This projectile will enable shotgun owners, to use their existing weapons to address a threat, without employing lethal force and at a safe standoff distance. In the U.S., the shotgun is the most common weapon used for home defense and this will allow current owners an opportunity to increase their range of responses to threats. The company also believes the 12-gauge round will improve its brand with this market segment and drive sales of Byrna launchers.

### Manufacturing

Byrna operates a 10,000 square foot manufacturing facility in Pretoria, South Africa with capacity to product 400,000 launchers per year and 1.8 million magazines per year. In 2020 Byrna opened a 14,000 square foot facility in Fort Wayne, Indiana and announced plans to move its manufacturing site to a new 30,000 square foot facility in the first half of calendar 2022. This will increase capacity and is expected to improve efficiency and lower costs.

### Distribution

Of the \$42.2 million in sales in fiscal 2021, \$9.6 million was from the wholesale channel and \$32.6 million from e-commerce, the vast majority of that from the company's web site, as Amazon contributed a small amount in Q4. For fiscal 2022 we expect 54% growth from the wholesale channel, to \$14.8 million and 20% growth from the e-commerce channel to \$39.2 million.

We estimate of the \$9.6 million in wholesale channel sales in fiscal 2021, about \$5.5 million was from domestic dealers, less than \$1 million from private security/law enforcement and \$3.5 million from international markets. We expect each of these to grow substantially in this fiscal year. Domestic dealer sales are projected to grow to \$7.5 million in fiscal 2022 partly based on recently signed deals with Sportsman's Warehouse and SCHEELS. Sportsman's Warehouse is expected to carry the full line of Byrna products at all 122 of its locations across 29 states. SCHEELS is also expected to carry the full Byrna line at its 31 locations across 14 states. These two retailers will add substantially to the company's retailer network. Private security/law enforcement sales are projected to increase to between \$1.5 and \$2.0 million from the introduction of the LE, the TCR and increased focus on these markets. International sales are expected to increase from \$3.5 million to \$5.5 million.

In fiscal 2022 we project e-commerce sales of \$39.2 million. Of this, we project sales from Byrna.com will be flat as fiscal 2021 benefitted from mentions by Sean Hannity on his show and we are not forecasting a similar impact this year. The entire growth in e-commerce we forecast is from Amazon.com.

Over time the company expects about 57% of sales from e-commerce, 18% from dealer/distributor, 15% from international and 10% from private security and law enforcement market.

### Sales by Channel

	FY2022	Goal
E-commerce	73%	57%
Dealer/distributor	14%	18%
International	10%	15%
Private Security/Law Enforcement	3%	10%

Source: Byrna Technologies, Inc. and Dawson James Securities estimates.

We believe there is significant room for growth in the dealer/distributor and international channel and also expect continued growth in the e-commerce channel, although at a rate less than the overall company growth rate. The private security/law enforcement market is large but fragmented and requires long sales cycles. We believe it will be a challenge for the company as it pursues this market.



## Outlook

We project revenue in fiscal 2022 of \$54 million, growing to \$76 million in fiscal 2023. In Q1 of fiscal 2022 the company posted gross margin of 58% and we expect incremental progress for the remaining quarters of the year as the company's efforts to reduce freight costs and return to a more orderly manufacturing cadence proceeds. We have the company exiting Q4 at a 60% gross margin and improving slightly in fiscal 2023 to 61%. We believe there is room for upside in our fiscal 2023 estimate, particularly if supply chain issues are solved and inflation subsides.

We estimate there is significant operating leverage as the company does not require a meaningful increase in operating expenses to support the revenue growth we have forecast. We have EBITDA margin improving as the year progresses, with the highest level in Q4 when sales are expected to be the highest for the year. For the full year we estimate EBITDA margin of 6.1% improving to 20% in fiscal 2023.

As of the end of Q1 Byrna had \$45 million in cash. Inventory levels are elevated in order to protect itself from further supply chain disruptions and we have assumed inventory turns do not return to normal until the end of fiscal 2023. Increased inventory turns will contribute to less investment in working capital and improved cash flow generation. With strong cash flow generation and an ample cash balance the company is in an enviable position to add to its product portfolio with acquisitions.

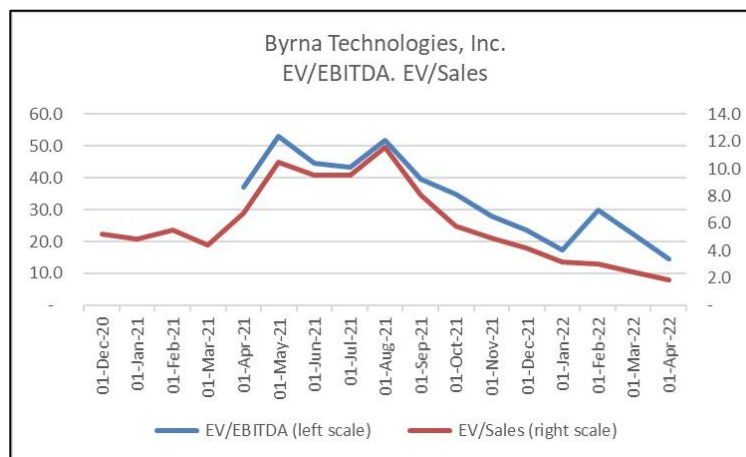
## Valuation

Firearm manufacturers like Smith & Wesson Brands and Sturm, Ruger trade at low multiples of sales while the rest of the comp group serving the personal safety and law enforcement markets trades at an average of 4x sales. Our price target for Byrna assumes a 3x multiple, a substantial discount to the sub-group. This results in a target of \$12 using our fiscal 2023 revenue estimate of \$76 million.

		Price	EPS	P/E	TEV	Sales	EV/ Sales	EBITDA	EV/ EBITDA
AOUT-US	American Outdoor Brands, Inc.	\$ 13.33	\$ 1.91	7.0	\$ 178.2	\$ 268.1	0.66	\$ 39.4	4.5
POWW-US	AMMO Inc	4.28	0.33	12.8	465.1	275.1	1.69	74.0	6.3
AXON-US	Axon Enterprise Inc	120.79	2.08	58.1	7,962.8	1,102.0	7.23	211.0	37.7
SSTI-US	ShotSpotter, Inc.	29.04	0.03	874.8	340.1	85.2	3.99	15.9	21.4
SWBI-US	Smith & Wesson Brands, Inc.	14.72	2.26	6.5	586.3	676.6	0.87	172.1	3.4
RGR-US	Sturm, Ruger & Company, Inc.	72.30	5.99	12.1	1,034.3	609.2	1.70	169.4	6.1
VTSI-US	VirTra, Inc.	5.40	0.35	15.4	46.0	26.4	1.74	5.6	8.2
WRAP-US	Wrap Technologies, Inc.	2.82	(0.39)	(7.3)	90.4	17.5	5.17	(11.0)	(8.2)
	Median			12.4			1.72		6.2
BYRN-US	Byrna Technologies Inc.	\$ 6.82	\$ 0.26	26.6	\$ 114.5	\$ 63.0	1.82	\$ 7.8	14.8

Source: FactSet and Dawson James Securities estimates

EV/Sales and EV/EBITDA have declined sharply over the past few months and we believe current valuation is attractive, particularly in front of projected accelerating revenue and EBITDA growth in the coming quarters.



Source: FactSet and Dawson James Securities estimates.

## Risks

Risk Analysis: Risks to achieving our target includes slower growth from higher interest rates, continuing supply chain disruptions, changes in regulations to the personal safety and firearm industry and changes in consumer demand for personal safety devices.

**Exhibit 1. Income Statement (\$ in 000's except per share data)**

	30-Nov-19 FY2019	30-Nov-20 FY2020	30-Nov-21 FY2021	28-Feb-22 FQ1 22A	31-May-22 FQ2 22E	31-Aug-22 FQ3 22E	30-Nov-22 FQ4 22E	30-Nov-22 FY2022E	30-Nov-23 FY2023E
Revenue	\$ 924	\$ 16,566	\$ 42,160	\$ 7,977	\$ 12,000	\$ 15,000	\$ 19,000	\$ 53,977	\$ 76,000
COGS	775	9,058	19,270	3,363	5,040	6,150	7,600	22,153	29,980
Gross Profit	149	7,508	22,890	4,614	6,960	8,850	11,400	31,824	46,020
	16%	45%	54.3%	58%	58%	59%	60%	59%	61%
Opex	3,438	11,817	26,181	8,023	8,100	8,100	8,500	32,723	35,177
Operating Income	\$ (3,289)	\$ (4,309)	\$ (3,291)	\$ (3,409)	\$ (1,140)	\$ 750	\$ 2,900	\$ (899)	\$ 10,843
Interest & Other, total	(1,121)	(7,952)	(152)	68	25	25	25	142	100
Pretax Income	(4,410)	(12,261)	(3,443)	(3,341)	(1,115)	775	2,925	(757)	10,943
Taxes	0	293	(160)	(120)	(56)	39	146	9	547
Net Income	\$ (4,410)	\$ (12,553)	\$ (3,283)	\$ (3,221)	\$ (1,059)	\$ 736	\$ 2,779	\$ (766)	\$ 10,396
Preferred Dividends	\$ -	\$ -	1,043	\$ -	\$ -	\$ -	\$ -	0	0
Net to Common	\$ (4,410)	\$ (12,553)	\$ (4,326)	\$ (3,221)	\$ (1,059)	\$ 736	\$ 2,779	\$ (766)	\$ 10,396
Basic Shares	10,354	12,679	19,610	23,790	23,290	22,953	23,028	23,265	23,215
Diluted Shares	10,354	12,679	19,610	23,790	23,290	23,053	23,128	23,265	23,315
Basic EPS	\$ (0.43)	\$ (0.98)	\$ (0.22)	\$ (0.14)	\$ (0.05)	\$ 0.03	\$ 0.12	\$ (0.03)	\$ 0.45
Diluted EPS	\$ (0.43)	\$ (0.98)	\$ (0.22)	\$ (0.14)	\$ (0.05)	\$ 0.03	\$ 0.12	\$ (0.03)	\$ 0.45
D&A	54	242	487	175	235	235	235	880	940
Stock Comp	218	1,252	3,150	812	812	812	812	3,248	3,248
Other	0	0	1,300	46	0	0	0	46	0
EBITDA	(3,016)	(2,814)	1,646	(2,376)	(93)	1,797	3,947	3,275	15,031
Margin	-332.6%	-17.0%	3.9%	-29.8%	-0.8%	12.0%	20.8%	6.1%	19.8%
	FY2019	FY2020	FY2021	FQ1 22A	FQ2 22E	FQ3 22E	FQ4 22E	FY2022E	FY2023E
Revenue	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
COGS	83.9%	54.7%	45.7%	42.2%	42.0%	41.0%	40.0%	41.0%	39.4%
Gross Profit	16.1%	45.3%	54.3%	57.8%	58.0%	59.0%	60.0%	59.0%	60.6%
Opex	371.9%	71.3%	62.1%	100.6%	67.5%	54.0%	44.7%	60.6%	46.3%
Operating Income	-355.7%	-26.0%	-7.8%	-42.7%	-9.5%	5.0%	15.3%	-1.7%	14.3%
Interest & Other, total	-121.3%	-48.0%	-0.4%	0.9%	0.2%	0.2%	0.1%	0.3%	0.1%
Pretax Income	-477.0%	-74.0%	-8.2%	-41.9%	-9.3%	5.2%	15.4%	-1.4%	14.4%
Tax Rate	0.0%	-2.4%	4.6%	3.6%	5.0%	5.0%	5.0%	-1.2%	5.0%
Net Income	-477.0%	-75.8%	-7.8%	-40.4%	-8.8%	4.9%	14.6%	-1.4%	13.7%
EBITDA	-326.3%	-17.0%	3.9%	-29.8%	-0.8%	12.0%	20.8%	6.1%	19.8%
Y/Y									
Revenue	269.4%	1692.1%	154.5%	-10.3%	-10.5%	72.4%	70.2%	28.0%	40.8%
Opex	61.7%	243.8%	121.6%	55.8%	46.2%	21.0%	-3.4%	25.0%	7.5%
Operating Income	57.7%	31.0%	-23.6%	729.4%	-156.4%	-141.6%	-193.6%	-72.7%	-1306.1%
Net Income	-104.8%	-184.7%	73.8%	-1084.2%	-152.0%	140.0%	186.6%	76.7%	1456.7%

Source: Byrna Technologies, Inc. and Dawson James Securities estimates



**Exhibit 2. Balance Sheet and Cash Flow Statement (\$ in 000's)**

	30-Nov-19 FY2019	30-Nov-20 FY2020	30-Nov-21 FY2021	28-Feb-22 FQ1 22A	31-May-22 FQ2 22E	31-Aug-22 FQ3 22E	30-Nov-22 FQ4 22E	30-Nov-22 FY2022E	30-Nov-23 FY2023E
Cash & ST Investments	1,082	3,175	56,308	44,701	45,122	45,219	52,317	52,317	69,522
Restricted Cash	0	6,389	92	0	0	0	0	0	0
A/R	438	834	1,658	1,101	1,371	1,500	1,689	1,689	2,044
Inventory	960	4,817	6,613	12,072	13,440	16,400	15,200	15,200	11,960
Prepaid Expenses & Other	377	1,391	1,490	1,934	2,909	3,637	4,606	4,606	5,576
<b>Current Assets</b>	<b>\$ 2,949</b>	<b>\$ 16,606</b>	<b>\$ 66,161</b>	<b>\$ 59,808</b>	<b>\$ 62,843</b>	<b>\$ 66,756</b>	<b>\$ 73,813</b>	<b>\$ 73,813</b>	<b>\$ 89,103</b>
Patent rights	99	811	3,668	3,612	3,551	3,490	3,429	3,429	3,185
Deposits for equipment	197	619	1,293	2,046	1,500	1,000	500	500	500
Right-of-use asset	0	1,200	1,086	1,444	1,381	1,318	1,255	1,255	1,003
PP&E	321	1,220	1,972	2,043	2,932	3,821	4,460	4,460	7,016
Goodwill	0	651	816	816	816	816	816	816	816
Restricted Cash	92	92	0	0	0	0	0	0	0
Other	0	17	318	727	1,094	1,367	1,732	1,732	2,096
<b>Total Assets</b>	<b>\$ 3,566</b>	<b>\$ 21,216</b>	<b>\$ 75,314</b>	<b>\$ 70,496</b>	<b>\$ 74,116</b>	<b>\$ 78,568</b>	<b>\$ 86,004</b>	<b>\$ 86,004</b>	<b>\$ 103,719</b>
A/P	640	6,629	6,996	6,744	10,145	12,681	16,063	16,063	19,445
Operating Lease	0	258	463	498	498	498	498	498	498
Deferred revenue	11	4,902	720	361	543	679	860	860	1,041
Convertible notes	2,759	0	0	0	0	0	0	0	0
Notes payable	0	75	0	0	0	0	0	0	0
Accrued Interest	266	0	0	0	0	0	0	0	0
<b>Current Liabilities</b>	<b>\$ 3,675</b>	<b>\$ 11,864</b>	<b>\$ 8,179</b>	<b>\$ 7,603</b>	<b>\$ 11,186</b>	<b>\$ 13,858</b>	<b>\$ 17,421</b>	<b>\$ 17,421</b>	<b>\$ 20,984</b>
Convertible N/P	1,875	0	0	0	0	0	0	0	0
NP	0	115	0	0	0	0	0	0	0
Deferred revenue	0	0	405	415	624	780	988	988	1,197
Operating Lease	0	828	632	1,071	1,071	1,071	1,071	1,071	1,071
<b>Equity</b>	<b>(1,984)</b>	<b>8,409</b>	<b>66,098</b>	<b>61,407</b>	<b>61,235</b>	<b>62,858</b>	<b>66,524</b>	<b>66,524</b>	<b>80,467</b>
<b>Total Liabilities &amp; Equity</b>	<b>\$ 3,566</b>	<b>\$ 21,216</b>	<b>\$ 75,314</b>	<b>\$ 70,496</b>	<b>\$ 74,116</b>	<b>\$ 78,568</b>	<b>\$ 86,004</b>	<b>\$ 86,004</b>	<b>\$ 103,719</b>

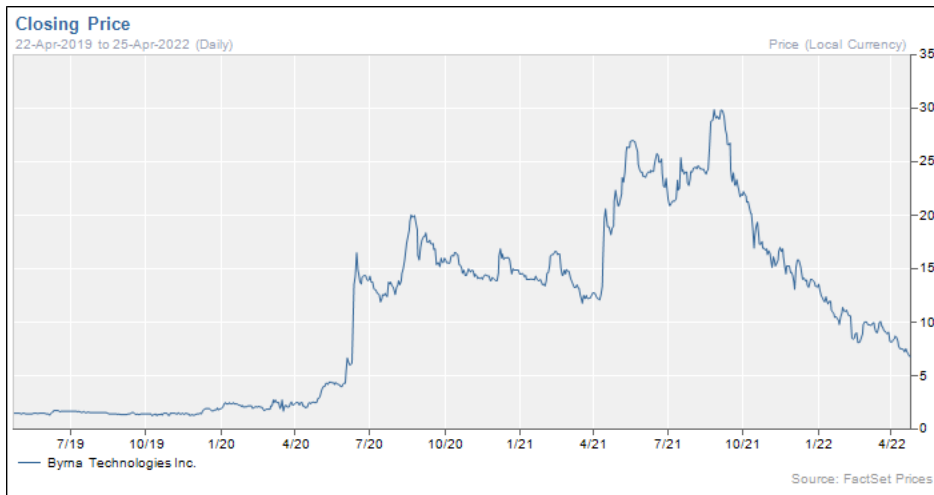
  

	30-Nov-19 FY2019	30-Nov-20 FY2020	30-Nov-21 FY2021	28-Feb-22 FQ1 22A	31-May-22 FQ2 22E	31-Aug-22 FQ3 22E	30-Nov-22 FQ4 22E	30-Nov-22 FY2022E	30-Nov-23 FY2023E
Net Income	(4,410)	(12,553)	(3,283)	(3,221)	(1,059)	736	2,779	(766)	10,396
Depreciation	54	242	487	175	235	235	235	880	940
Stock Comp	218	1,252	3,150	1,284	812	812	812	3,720	3,248
Other	1,612	8,873	63	16	389	383	344	1,131	(156)
Working Capital	(1,251)	4,723	(4,854)	(6,686)	969	(1,144)	3,604	(3,256)	5,477
<b>Operating CF</b>	<b>\$ (3,776)</b>	<b>\$ 2,538</b>	<b>\$ (4,437)</b>	<b>\$ (8,432)</b>	<b>\$ 1,346</b>	<b>\$ 1,022</b>	<b>\$ 7,773</b>	<b>\$ 1,708</b>	<b>\$ 19,905</b>
Capx	(246)	(1,426)	(1,700)	(915)	(1,000)	(1,000)	(750)	(3,665)	(3,000)
Acquisitions		(489)	(4,044)	0					
Other		(80)	(138)	0					
<b>Investing Activities</b>	<b>\$ (246)</b>	<b>\$ (1,995)</b>	<b>\$ (5,882)</b>	<b>\$ (915)</b>	<b>\$ (1,000)</b>	<b>\$ (1,000)</b>	<b>\$ (750)</b>	<b>\$ (3,665)</b>	<b>\$ (3,000)</b>
Equity	0	7,714	57,333	(2,288)	75	75	75	(2,063)	300
Debt	4,032	54	(81)	0	0	0	0	0	0
<b>Financing</b>	<b>\$ 4,032</b>	<b>\$ 7,768</b>	<b>\$ 57,252</b>	<b>\$ (2,288)</b>	<b>\$ 75</b>	<b>\$ 75</b>	<b>\$ 75</b>	<b>\$ (2,063)</b>	<b>\$ 300</b>
FX	\$ (19)	\$ 171	\$ (189)	\$ (64)	\$ -	\$ -	\$ -	\$ (64)	\$ -
<b>Change in Cash</b>	<b>\$ (8)</b>	<b>\$ 8,482</b>	<b>\$ 46,744</b>	<b>\$ (11,699)</b>	<b>\$ 421</b>	<b>\$ 97</b>	<b>\$ 7,098</b>	<b>\$ (4,084)</b>	<b>\$ 17,205</b>

Source: Byrna Technologies, Inc. and Dawson James Securities estimates

**Important Disclosures:**

**Price Chart:**



**Price target and ratings changes over the past three years:**

Initiated – Buy – April 26, 2022 – Price Target \$12

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- 1) **Buy:** The analyst believes the price of the stock will appreciate and produce a total return of at least 20% over the next 12-18 months;
- 2) **Neutral:** The analyst believes the price of the stock is fairly valued for the next 12-18 months;
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The following chart reflects the range of current research report ratings for all companies, followed by the analysts of the Firm. The chart also reflects the research report ratings relating to those companies for which the Firm has performed investment banking services.

Current as of... 26-Apr-22

	<b>Company Coverage</b>		<b>Investment Banking</b>	
<b>Ratings Distribution</b>	# of Companies	% of Total	# of Companies	% of Totals
Market Outperform (Buy)	32	74%	4	13%
Market Perform (Neutral)	11	26%	0	0%
Market Underperform (Sell)	0	0%	0	0%
Total	43	100%	4	9%

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