Tel-Instrument Electronics Corp. (TIKK-OTC) Ken Nagy, CFA 9/30/2020

52-Week High	**$4.99**
52-Week Low	**$2.56**
One-Year Return (%)	**16.88**
Beta	**0.76**
Average Daily Volume (sh)	**3,198**
Shares Outstanding (mil)	**3.2**
Market Capitalization ($mil)	**$12**
Short Interest Ratio (days)	**0.27**
Institutional Ownership (%)	**0**
Insider Ownership (%)	**58.3**
Annual Cash Dividend	**$0.00**
Dividend Yield (%)	**0.00**
3-Yr. Historical Growth Rates	
Sales (%)	**58.0**
Earnings (%)	**75.0**
Dividend (%)	**N/A**
P/E using TTM EPS	**3.6**
P/E using 2020 Estimate	**6.3**
P/E using 2021 Estimate	**3.8**

Risk Level	**High**
Type of Stock	**Small-Growth**
Industry	**Aerospace-Defense**

Overview

Tel-Instrument Electronics Corp. (TIKK-OTC) designs and manufactures avionics test and measurement solutions for the global commercial air transport, general aviation, and government/military aerospace and defense markets. The company has been entangled in a legal environment that leaves several questions for the medium term. While the legal environment remains unclear, the company has become more profitable, won bigger contracts, and has continued to build its back log. What once threatened to sink the company now looks manageable, as the firm announced in its most recent quarterly earnings that it has enough to cover the legal costs of the lawsuit. The suit could end one of three ways; settlement, paying the damages, or winning the appeal. Regardless of how it ends TIKK is undervalued. After building a two-stage model and subtracting the value of legal liability, we see the valuation of the firm at $6.91

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Business Overview

Tel-Instrument Electronics Corp. designs and manufactures avionics test and measurement solutions for the global commercial air transport, general aviation, and government/military aerospace and defense markets. The Company sells commercial and military products as a single avionics business, and its designs and products across both markets. Over the past year the company has become more profitable on the gross and operating margin line.

March 2020		
Net Sales	15,774,943	
Cost of Sales	8,365,042	
Gross Margin	**7,409,901**	**46.97%**
SG&A	2,477,548	
Litigation Expenditure	140,050	
Other Expenditures	2,239,811	
Total Operating Expenses	4,857,409	
Operations Income	**2,552,492**	**16.18%**

March 2019		
Net Sales	12,116,050	
Cost of Sales	6,698,830	
Gross Margin	**5,417,220**	**44.71%**
SG&A	2,215,521	
Litigation Expenditure	234,720	
Other Expenditures	2,312,043	
Total Operating Expenses	4,762,284	
Operations Income	**654,936**	**5.41%**

The reason for this impressive growth is the Avionics Government division. The Company has won several large, competitively bid contracts from the military and has become the primary supplier for the U.S. Military, as well as the NATO countries. Government sales make up the majority of sales, and backlog, as well as higher than average margins. Operating expenses over the past year have remained relatively flat, rising by 1.9%, while sales have grown 30.2%.

Avionics Government			Avionics Commercial			
Sales	$ 12,770,363.00		**Sales**	$	3,004,580.00	
CGS	$ 6,606,622.00		**CGS**	$	1,758,420.00	
Gross profit	$ 6,163,741.00	48.27%	**Gross profit**	$	1,246,160.00	41.48%

The T-47/M5 IFF Test set is the company's newest test set. The company sold approximately $5 million of these test sets to Canada, Japan, Korea, Europe, and other international customers. On July 20, 2020 TIKK announced a receipt of a $1.6 million test set order for the South Korean military. There is also interest from various U.S. customers. Tel has also received U.S. DOD AIMS certification for the T-47/M5 Test Set.

The $1.6 million test set order for the South Korean military is not included in backlog. Beyond the TR-47/M5, the CRAFT AN/USM-708, CRAFT AN/USM-719,TS-4530A, and TS-4530i test sets, involve a new generation of technology, including the next generation of IFF testing, and is expected to enable the company to continue to be a major supplier of avionics test equipment to the military for years to come. The firm also believes its new technology will also allow it to increase sales to the commercial avionics market in the future and expand into the very large secure communication test market.

Government Leads to Commercial Expansion

The Company's new lightweight 4.5-pound SDR/OMNI hand-held products that should generate increased market share at very attractive gross margin levels. As the world's first "All-in-One" Avionics Test Set utilizes true software-designed radio technology that enables it to test all common avionics functions in one 4.5-pound test set. The SDR/OMNI has very wide frequency to accommodate new commercial and military waveforms in an industry leading 4.5-pound package. This is half the weight of competitive test sets. It utilizes the latest touch screen technology and has the capability to replace all TIC commercial test sets and military flight-line test sets with one handheld product. Covid-19 has likely slowed this process

	Commercial		Government		Total
2020 Backlog	$	200,193.00	$3,824,984.00	$	4,025,177.00
2019 Backlog	$	544,496.00	$5,533,635.00	$	6,078,131.00

Legal

On March 24, 2009 Aeroflex filed a petition against the company in Sedgwick county Kansas. The suit alleged that Tel-Instrument and its two employees had misappropriated Aeroflex's proprietary technology in connection with winning a significant contract from the US Army. In December of that same year, the Kansas District Court dismissed the Aeroflex action and the case was appealed. In May of 2012 the Kansas Supreme Court reversed and remanded the Aeroflex action to the Kansas District Court. The case then entered an extended discovery period. The Aeroflex trial began in March of 2017, and after nine weeks the jury rendered a verdict. The jury found no misappropriation of Aeroflex trade secrets but did rule that the company had interfered with a prospective business opportunity and awarded damages of $1.3 million for lost profits, as well as an additional $1.5 million resulting from non-disclosure agreements. The jury also decided punitive damages should be allowed against the company. The court awarded Aeroflex an additional 2.1 million. Total damages awarded at $4.9 million will accrue interest until this matter is settled. The appeals process goes on. As of March 31, 2020, the amount is $5,657,549. That amount is on the company's balance sheet as a liability. This could end one of three ways; the appeal could find merit and the award could be lowered or cancelled, there could be a settlement, or the firm could pay the judgement plus interest. The company made an offer to settle in February of 2020 and that offer was rejected. Covid-19 has slowed this process.

Projected Income Statement

INCOME STATEMENT ($ Millions)	Jun-19 Q1 20	Sep-19 Q2 20	Dec-19 Q3 20	Mar-20 Q4 20	Jun-20 Q1 21	Sep-20 Q2 21 E	FY 2018	FY 2019	FY 2020	FY 2021 E	FY 2022 E	FY 2023 E
REVENUE												
Net Revenue	**3.31**	**3.91**	**4.73**	**3.82**	**2.94**	**3.50**	**10.0**	**12.1**	**15.8**	**16.2**	**18.5**	**20.5**
Sequential Growth		*18%*	*21%*	*-19%*	*-23%*	*19%*						
OPERATING EXPENSES												
Cost of Revenues	1.72	2.04	2.52	2.08	1.43	1.72	6.9	6.7	8.4	8.0	8.8	9.0
% of Revenue	*52.2%*	*52.1%*	*53.3%*	*54.4%*	*48.8%*	*49.1%*	*68.8%*	*55.2%*	*53.0%*	*51.6%*	*47.3%*	*43.9%*
Gross Profit -	**1.6**	**1.9**	**2.2**	**1.7**	**1.5**	**1.8**	**3.1**	**5.4**	**7.4**	**8.2**	**9.8**	**11.5**
Proforma Gross Margin	*47.8%*	*47.9%*	*46.7%*	*45.6%*	*51.2%*	*50.9%*	*31.2%*	*44.8%*	*47.0%*	*48.4%*	*52.7%*	*56.1%*
R&D + Engg	0.53	0.53	0.58	0.61	0.63	0.59	2.3	2.3	2.2	2.5	2.6	2.8
% of Revenue	*15.9%*	*13.4%*	*12.3%*	*15.9%*	*21.5%*	*16.7%*	*22.7%*	*19.1%*	*14.2%*	*6.9%*	*14.1%*	*13.4%*
SG&A	0.61	0.63	0.61	0.63	0.66	0.65	2.5	2.2	2.5	2.60	2.70	2.80
% of Revenue	*18.5%*	*16.0%*	*12.9%*	*16.5%*	*22.5%*	*18.6%*	*24.9%*	*18.3%*	*15.7%*	*25.5%*	*14.6%*	*13.7%*
GW Amort, Restructuring, other	*0.01*	*0.09*	*0.02*	-	*0.00*	*0.02*	*2.8*	0.2	*0.1*	0.14	*0.15*	*0.16*
% of Revenue												
Total Operating Expenses	1.148081	1.24	1.21	1.24	1.30	1.25	7.5	4.8	4.9	5.2	5.5	5.7
% of Revenue	*34.7%*	*31.8%*	*25.5%*	*32.4%*	*44.1%*	*35.8%*	*75.2%*	*39.3%*	*30.8%*	*32%*	*29%*	*28%*
Operating Income -	**0.43**	**0.63**	**1.01**	**0.50**	**0.21**	**0.53**	**-4.4**	**0.7**	**2.6**	**2.9**	**4.3**	**5.8**
Operating Margin	*13.1%*	*16.1%*	*21.2%*	*13.2%*	*7.1%*	*15.1%*	*-44%*	*5%*	*16%*	*16%*	*23%*	*28%*
NON-OPERATING ITEMS												
Non operating Income/Expense	-0.26	-0.17	-0.18	-0.10	-0.15	-0.16	-0.1	-1.2	-0.8	-0.80	-0.850	-0.88
% of Revenue	*-7.73%*	*-4.47%*	*-3.76%*	*-2.65%*	*-5.04%*	*-4.57%*	*-0.70%*	*-9.78%*	*-4.98%*	*0.17%*	*-4.59%*	*-4.29%*
Tax Provision	0.0	0.0	0.0	-2.6	0.0	0.0	-0.064	0.000	-2.649	0.300	0.4	0.5
Effective Tax Rate												
Net Income -	**0.18**	**0.46**	**0.83**	**3.03**	**0.03**	**0.37**	**-4.41**	**-0.53**	**4.42**	**1.84**	**3.05**	**4.41**
Net Income Margin	*5.4%*	*11.7%*	*17.5%*	*79.1%*	*1.1%*	*10.6%*	*-44.0%*	*-4.3%*	*28.0%*	*11.4%*	*16.5%*	*21.5%*
Adjustments (for one-time NR iter												
EARNINGS PER SHARE												
EPS - Basic	$0.05	$0.14	$0.25	$0.92	$0.01	$0.11	-$1.36	-$0.16	$1.36	$0.57	$0.94	$1.35
EPS - Diluted	$0.04	$0.09	$0.17	$0.65	$0.01	$0.11	-$1.36	-$0.16	$0.95	$0.57	$0.94	$1.35

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Valuation

To value the firm, we used a two-stage growth model. The model assumes that the firm will outgrow the industry in an initial period followed by a period where the firm's growth rate looks a bit more like economy. Since the firm has an unknown contingent liability on its balance sheet, we subtract that from the value of the firm. To be conservative we used the entire $5.6 million amount from the most recent 10K. That brings us to a value of $6.91 which is significantly higher than where the stock trades now. Another way to account for the liability would be to take a weighted average of the three possible ways in which the liability could be settled.

INCOME STATEMENT ($ Millions)	FY 2020	FY 2021 E	FY 2022 E	FY 2023 E	FY 2024 E	FY 2025 E
REVENUE						
Net Revenue	**15.8**	**16.2**	**18.5**	**20.5**	**22.0**	**24.0**
Sequential Growth						
OPERATING EXPENSES						
Cost of Revenues	8.4	8.0	8.8	9.8	10.5	11.0
% of Revenue	*53.0%*	*49.5%*	*47.3%*	*51.6%*	*47.7%*	*45.8%*
Gross Profit -	**7.4**	**8.2**	**9.8**	**10.8**	**11.5**	**13.0**
Proforma Gross Margin	*47.0%*	*50.5%*	*52.7%*	*52.4%*	*52.3%*	*54.2%*
R&D + Engg	2.2	2.5	2.9	3.3	3.5	3.6
% of Revenue	*14.2%*	*15.4%*	*15.7%*	*15.9%*	*15.9%*	*15.0%*
SG&A	2.5	2.6	2.9	3.25	3.50	3.85
% of Revenue	*15.7%*	*16.0%*	*15.4%*	*15.9%*	*15.9%*	*16.0%*
Operating Income -	**2.6**	**2.9**	**3.9**	**4.1**	**4.4**	**5.4**
Tax Provision	-2.6	0.3	0.4	0.5	0.5	0.6
Net Income	**4.42**	**1.84**	**2.60**	**4.54**	**4.82**	**5.78**
Net Income -	**4.42**	**1.84**	**2.60**	**4.54**	**4.82**	**5.78**
Depreciation	0.10	0.11	0.11	0.11	0.11	0.11
Capital Expenditures	0.13	0.13	0.14	0.14	0.14	0.14
Change in Working Capital	1.90	1.50	1.40	1.30	1.20	1.10
Cash Flow	**2.49**	**0.31**	**1.17**	**3.21**	**3.59**	**4.65**
Discount Rate (12%)		1.12	1.25	1.40	1.57	1.76
Present Value Cash Flow		**0.28**	**0.93**	**2.29**	**2.28**	**2.64**

PV High Growth Phase	$ 8.42
PV Terminal growth Phase	$ 19.68
PV Total	$28.10
Contingent Liability	-$5.60
Firm Value	$22.50
Value per Share	$6.91

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If we assume there is a 33.3% chance of winning appeal in which the firm pays zero, a 33.3% chance of a $3 million settlement, and 33.3% chance of having to pay the $5.6 million then the amount of the liability we subtract is $2.85 million. This would lead to a valuation of $7.75.

PV High Growth Phase		$	8.42
PV Terminal growth Phase		$	19.68
PV Total			$28.10
Contingent Liability			-$2.85
Firm Value			$25.25
Value per Share			$7.75

For now, we are happy to remain conservative and subtract the larger amount, but investors should be aware that the firm offered $2.5 million and was rejected. Management has made it clear it plans to make another offer. Whether or not the pandemic has made the chance of settlement more likely remains up for interpretation. Should the appeal go through and the firm owes nothing the value of the firm is $8.63

PV High Growth Phase		$	8.42
PV Terminal growth Phase		$	19.68
PV Total			$28.10
Contingent Liability			$0.00
Firm Value			$28.10
Value per Share			$8.63

Where have we seen this before?

Medium to long-term uncertainty is nothing new. We would point to a Tower Semiconductor (TSEM) as an example of a medium-term uncertainty that clouded the company's future and then thrived when it was removed. Recall in 2005 Tower planned a capacity expansion just as the market for semiconductor equipment was trending down. Finding itself strapped for cash, it sold convertible debt to institutional investors including the Bank of Israel. For quite a while it was unknown if the Bank of Israel could even hold equity. Management's plan was to grow first and then fix the problem of the share count/ convertible debt issue. That's just what it did and the stock which languished for years shot to $20.00 per share. Perhaps this is what we are seeing from Tel-Instrument.

The ratio of EV/EBITDA is used to compare the entire value of a business with the amount of EBITDA it earns on an annual basis. The ratio tells investors how many times EBITDA they must pay, were they to acquire the entire business. TIKK has a lower EV/EBITDA than the Aerospace and Defense industry average and it's competitor Viavi Solutions.

	EV/ EBITDA
TIKK	5.82
Industry Average	14.94
VIAV	11.66

Risks

- Tel-Instrument Electronics Corp. is a micro-cap company that trades with very low volume.
- The legal environment that the firm is involved in will lead to higher legal expenses and could lead to large settlement or fine.
- Tel-Instrument Electronics must continue to innovate to remain competitive.

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