

## Company Evaluation

Investment Rating: **BUY**

November 29<sup>th</sup>, 2022

# Shenzhen Sunlord Electronics Co.,Ltd.

002138.SZ

## Company Info

Shenzhen Sunlord Electronics Co.,Ltd.

<https://www.sunlordinc.com/>

Company Code 002138

Chairman Yuan Jinyu

CEO Shi Hongyang

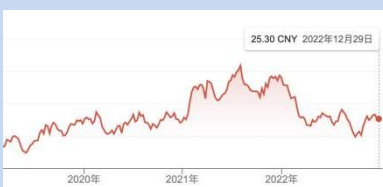
Price (22 Nov 28) 25.44

52-week price range 18.61~39.18

## Stock Performance

Ups & Downs (%)

	1M	2M	3M
Absolute Return	-0.63%	17.8%	27.1%
Relative Return	-0.63%	18.5%	7.54%



P/E ratio	34.38
P/B ratio	3.64
Dividend Yield	1.19%
Outstanding Shares	793m
ROE	5.48%

## Brief Introduction

Shenzhen Sunlord Electronics Co.,Ltd. is founded in 2000 and listed on the Shenzhen Stock Exchange in 2007. Its main product are chip electronic components, varying from basic circuit components like Inductors and Capacitors to highly-integrated products like Printed Circuit Board (PCB) and sensors (fig.1). The dominant business department in Sunlord is its Automotive Electronic Business Department and its products enjoy wide applications (fig.2).



(fig.1: Sunlord main products)



(fig.2: Application areas of products of Sunlord's Automotive Electronic Business Department)

## Sunlord Equity Research

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## Company Update

### The biggest domestic chip Inductor production enterprise

Currently, Sunlord's output of chip inductors accounts for more than 70% of the domestic total, and more than 15% worldwide, ranking first in China and top 3 in the world. Contributed to its strong R&D ability and excellent product quality, Sunlord has become the supplier of top tier and well-known companies in the world.

In RMB	2017	2018	2019	2020	2021
Revenue (100 Millions)	19.88	23.62	26.93	34.77	45.77
Growth	14.47%	18.84%	14.02%	29.09%	31.66%
Net Profit (100 Millions)	16.38	19.85	22.41	29.37	38.93
EBITDA (100 Millions)	5.45	6.75	7.31	10.27	12.97
Net Income (100 Millions)	3.41	4.79	4.02	5.88	7.85
ROA	4.52%	5.25%	4.85%	6.13%	6.48%
ROE	5.37%	6.20%	5.75%	7.37%	8.02%
P/B Ratio	5.19	4.81	4.59	4.19	3.68
Shares (100 Millions)	8.17	8.12	7.98	7.98	8.00
Source: Google Finance					

## I. Macroeconomics Analysis

### 1. GDP

Over the past three years, GDP growth rate has slowed down, especially to 2.3% in 2020 due to the outbreak of epidemic. In 2021, China's macro economy develops towards a good trend due to the control of the domestic epidemic and the support of national policies, with a growth in GDP of 8.1%. However, in 2022, recoveries have been interrupted by various COVID-19 outbreaks and stringent public health measures, resulting in a low expectation of GDP growth rate of 2.7% (World Bank).

In December, 2022, Chinese government took a sharp U-turn in its COVID tackling measures, which will lead to a foreseeable recovery of economy in 2023. Moreover, the long-term growth trend of China economy is still promising. Thus, we believe that a good economic environment in the future can be maintained with high confidence. With the rapid growth of GDP, the demand for essential basic electronic components will increase. The electronic component industry will also enjoy higher investment in R&D, which is vital for the industry. In general, the electronic component industry will have a good economic environment in the near future.

### 2. Exchange Rate

Sunlord Electronics' domestic sales accounted for nearly 80% of its total sales in the past three years, and most of its income mainly depends on the domestic market. However, the company's future plans will greatly expand its international market share, so the exchange rate may have a greater impact on its future development. Affected by the Sino-US trade war and the Federal Reserve's multiple interest rate hikes, the USD/RMB exchange rate will fluctuate between 6.3-7.3 from 2019 to 2022, and it will remain at around 7 in the near future, which is at a relatively high level, which is beneficial to Sunlord Electronics' foreign export trade. However, it will also lead to an increase in the cost of supply chain materials at the same time.



### 3. National Policy Analysis

Sunlord Electronics' operations are affected by various significant national policies as follows.

National call for break through of “stranglehold” technologies. Such technologies are those China must import because it is unable to produce them domestically in sufficient quality or quantity. Sunlord was established in Shenzhen in 2000 under the national “863” project, and has successfully achieved the breakthrough of high-Q capacitors production technology, which was once a “stranglehold” technology for China.

National goal of “carbon emission peaking” in 2030 and “carbon neutrality” in 2060 & Promotion of EV instead of traditional fuel cars. This will lead to an rapid growth of EV industry, which will benefit the upstream electronic component industry, because EV will rely significantly more heavily on PCB and other electronic components compared with fuel cars. As Sunlord's main business is to provide electronic components for the auto industry, the transition to EV of our society will certainly secure Sunlord's sales of its products.

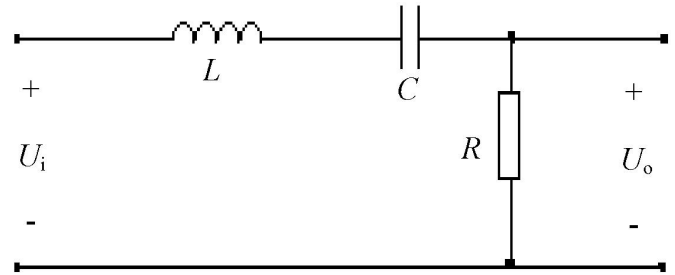


## II. Industry Analysis

### 1. Basic Information of the Industry

#### (1) Basic Circuit Components: R, C, and L

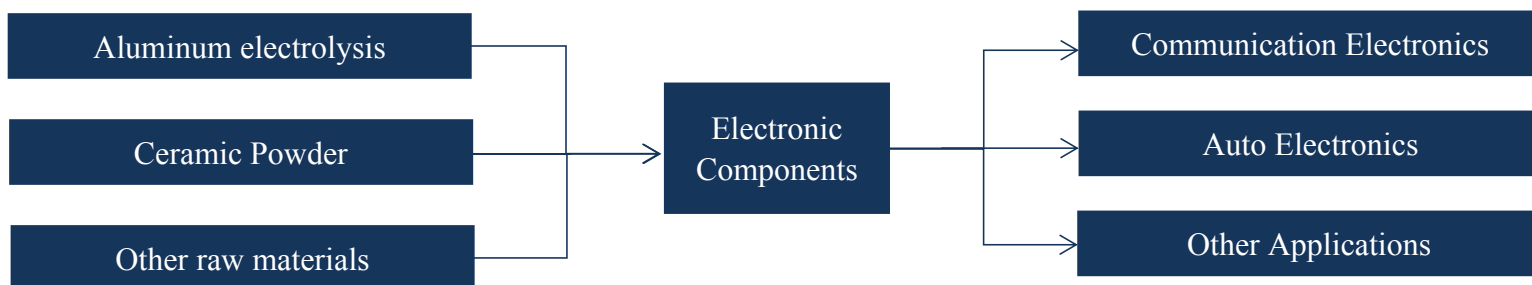
Passive component, also known as passive device, is a circuit component that does not affect the basic characteristics of the signal and only allows the signal to pass through without changing it. Passive components mainly include RCL components (capacitors(C), inductors(L) and resistors(R)) and passive RF devices. Among them, RCL components are the most common, accounting for about 90% of the total output value of passive components. According to ECIA, an electronic components industry association, capacitors, inductors and resistors accounted for 65%, 15% and 6% of the total output value of passive components respectively in 2019. In terms of regional distribution, the Chinese mainland and Asia combined accounted for 63% of the global passive component market in 2019. The Chinese mainland alone accounts for 43% of the total, with a market size of about \$12 billion.



#### (2) Integrated products: PCB and others

PCB (Printed Circuit Board), the Chinese name is printed circuit board, also known as printed circuit board, is an important electronic component, is the support body of electronic components, is the carrier of electrical interconnection of electronic components. Because it is produced by electronic printing, it is called "printed" circuit board. In recent years, the global PCB production capacity is gradually transferred to China. As an important part of the midstream industry chain, PCB is greatly affected by the price of upstream raw materials and the demand of downstream electronic terminal products. In the second half of 2020, COVID-19 affected upstream raw material production and transportation, causing price increases to be passed on to downstream PCB manufacturers. In addition, in recent years, the downstream 5G and new energy automobile industries have accelerated development, and the demand for PCB continues to grow. At present, domestic PCB manufacturers continue to increase new capacity to cope with it.

#### (3) Upstream & Downstream Industry Analysis



Upstream: core raw material production requirements are strict. Production technologies of materials like ceramic powder is still completely controlled by foreign manufacturers, hard to achieve domestic. As a result, the raw material price and production cost of domestic electronic components enterprises will be greatly affected by international trade and transportation.

Downstream: 5G, automotive electronics field demand continues to flourish. The demand for electronic components of new energy vehicles is several times that of traditional fuel vehicles. Therefore, under the trend of vehicle electrification and intelligence, the proportion of automotive electronics is constantly increasing, driving the demand for passive components to rise significantly.

### III. Company Analysis

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#### 1. Establishment and History

In September 2000, Shenzhen Shunluo Electronics Co., LTD., the predecessor of Shenzhen Sunlord Electronics Co., Ltd., was formally established. In 2004 and 2005, the company was selected as one of the top 500 high-tech and high-growth enterprises in the Asia-Pacific region for two consecutive years. In June 2007, the company was successfully listed on Shenzhen Stock Exchange with the stock code 002138. The registered capital of the company is 806,318,354 million, and the total share capital is 806 million.

#### 2. Management structure

The company has implemented the ESOP in 2017. As of September 24, 2019, all the company's shares held by the ESOP have been sold out, with a total of 20,970,0248 shares sold, accounting for 2.60% of the total issued share capital of the company. The interests of employees are highly related to the interests of the enterprise, and can fully mobilize the enthusiasm of employees. The overall shareholding ratio of the management personnel is relatively high.

#### 3. Main business

Shenzhen Sunlord Electronics Co., Ltd. is mainly engaged in the research and development, design, production and sales of new electronic components; providing technical solution design, technology transfer and consulting services, and selling self-produced products. The company's main products are magnetic devices, microwave devices, sensing and sensitive devices and precision ceramic products.

At present, with its strong technical force, excellent product quality and perfect service, Shunluo Electronics has won the trust of Motorola, Dell, HP, Sony, Panasonic and other world-class customers, and has developed into the largest chip inductance/magnetic bead production enterprise in China. For 15 consecutive years, the company has been rated as "Top 100 Electronic components Enterprises in China" and "Single Champion enterprise of manufacturing industry". At present, the market share of the core product chip inductor ranks the first in China and the top three in the world.

#### 4. Owner structure

Sunlord Electronic equity structure is scattered, but generally stable, the company's first largest shareholder for chairman Mr Yuan Jinyu, holding 11.8%, the second largest shareholder for the Hong Kong central clearing company, an 8.44% stake, the third largest shareholder for Xinyu hengshun electronic technology development co., LTD., a 7.59% stake, and ESOP of 2.6%.

#### 5. Financial Structure

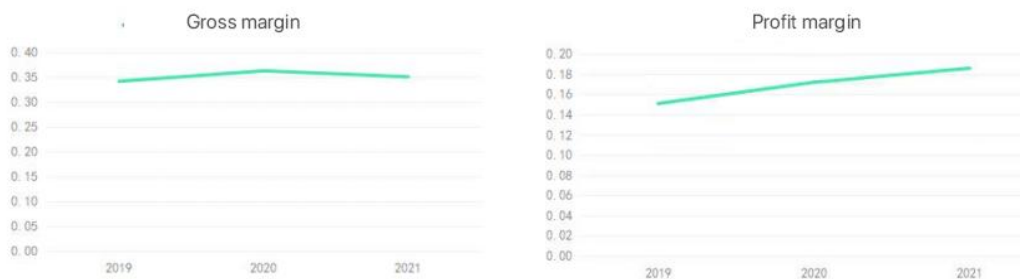
The total financing of the company reached 2.544 billion yuan. According to the disclosure of the annual report, the company did not publicly issue bonds, and the main financing channel of the company is equity financing, among which private placement accounts for a large proportion of the total financing. Among its main shareholders are a number of banking institutions, which means that Sunlord Electronics is relatively stable in financing, with less liquidity risk.

## 6. Comparative Advantage

The company's sales volume mainly comes from the industry cutting-edge technology leaders, and it has established a long-term and deep strategic cooperation relationship with these customers. At the same time, as the industry leader, it has technical advantages, and has a say and pricing power for inductor products. More importantly, the next few years will be the booming period of EV, as well as the main construction period of 5G network. This 5G and EV era will drive the rapid development of chips, smart phones and auto PCBs, which will bring huge business opportunities to the Sunlord Electronics.

## 7. Ratio Analysis

### (1) Profitability



From the perspective of gross profit margin and net profit margin on sales, Sunlord Electronics' net profit margin basically maintained 4.5 percentage points higher than the industry average from 2019 to 2021. With innovative strategies, Sunlord Electronics has achieved small scale and high efficiency, and both gross and net interest rates are high and showing a trend of growth, and demonstrated the best risk resistance and profitability. In conclusion, it still has great potential for development in the future.

### (2) Liquidity

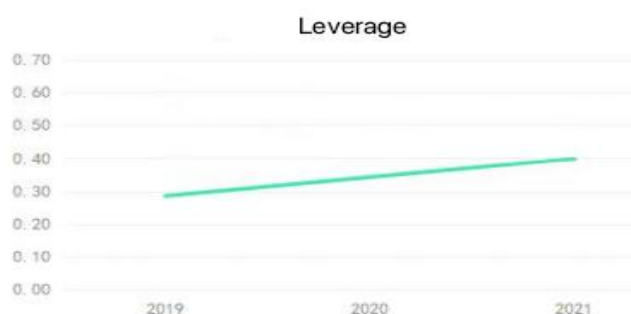


Current ratio and quick ratio are two important indicators to measure the short-term solvency of enterprises. The current ratio measures an enterprise's ability to realize and repay its current assets. From the given chart we can observe that Sunlord Electronic's liquidity level is higher than the industry average.

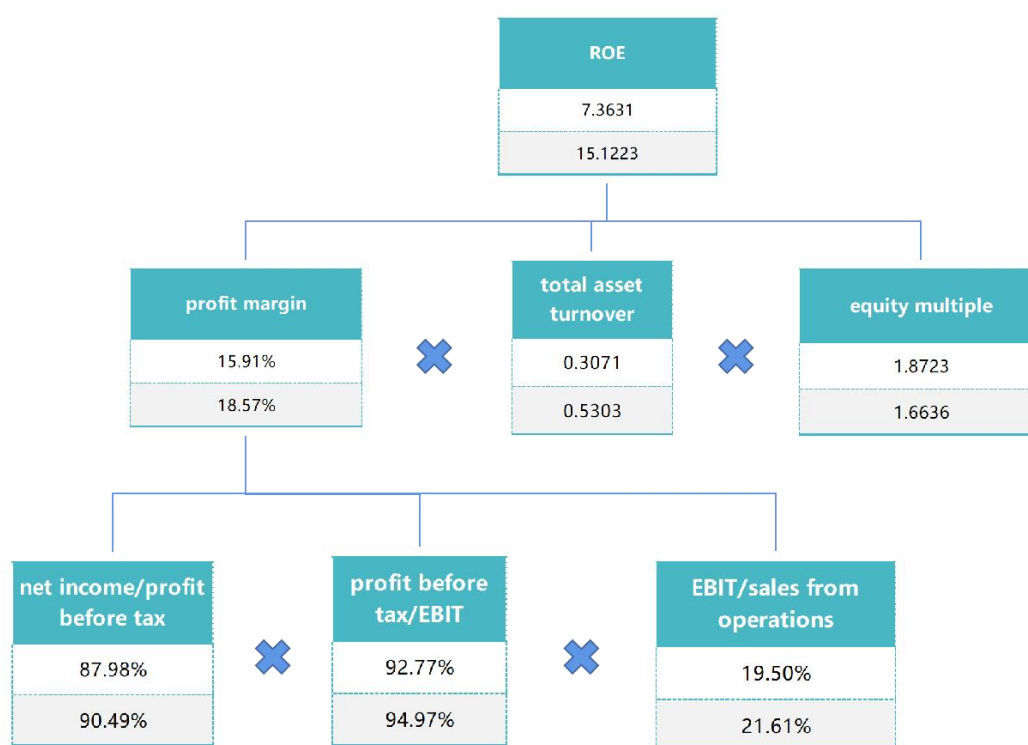


### (3) Leverage

The asset-liability ratio of Sunlord Electronics is similar to the average value of the industry. Combined with its good short-term solvency, we can see the relatively stable risk control ideas of Sunlord. This lead to the result that Sunlord electronics maintained a continuous rise, and the increase amplitude of the growth trend. The innovative strategic line adopted by the company makes it face the impact of the COVID-19 pandemic, but it has no obvious impact and has good growth potential. Of course, its innovation and active expansion are accompanied by certain risks.



## 8. Dupont Analysis



Dupont analysis is a comprehensive analysis method of corporate profitability and business strategy by analyzing the composition of return on equity. The return on equity of an enterprise is obtained by multiplying the net interest rate of returning to the parent, the turnover of total assets and the average equity multiplier of returning to the parent, which represent the operating profitability, asset utilization efficiency and financing ability of the enterprise respectively. The non-controlling shareholders of Sunlord Electronics share 7.68% of the net profit, which should not be ignored, indicating that Sunlord Electronics' net profit advantage is even greater, and the data confirms this judgment. The comparison of net interest rate confirms the emphasis of Sunlord electronic decision makers on its technological advantage and innovation advantage. The operating profit margin of Sunlord Electronics is out of the dust, showing its advantage in the revenue capacity of the main business. From the total assets turnover rate, Sunlord electronics is obviously low, according to its financial statements disclosed in the company's strategy, which confirms its "high net profit - low turnover" "Apple-like" revenue ideas.

## IV. Firm Valuation

### 1. WACC

#### (1) $W_E$ & $W_D$ and Capital Structure

Based on its newly semiannual report, Sunlord bears an average interest rate of 6.3 percent annually, and effective marginal tax rate is only about 9.5 percent. Keeping more debt can take good use of the tax shield, while facing increasing financial distress cost. Furthermore, semiconductor industry is well subsidized through multiple policies, and thus, a dramatically low effective marginal tax rate seems to have sealing the trade-offs. In fact, with an interest expense less than 0.1 percent of its net income, Sunlord seriously deviates from static optimal capital structure model, while more close to peck-order model, which indicating a lower debt-to-equity ratio for these kinds of companies.

Year	2019	2020	2021	Average
Total Asset (100M)	63.04	75.22	97.41	--
Total Debt (100M)	17.95	25.73	38.91	--
$W_D$	28.47%	34.21%	39.94%	34.21%
Total Equity (100M)	45.09	49.49	58.50	--
$W_E$	71.53%	65.79%	60.06%	65.79%

From above we can obtain:

$$W_D = \frac{(28.47\% + 34.21\% + 39.94\%)}{3} = 34.21\%$$

$$W_E = 1 - W_D = 65.79\%$$

#### (2) $R_D$ and $T_C$

We use the average annual interest rate of Sunlord to predict the future debt cost, which is:

$$R_D = 6.3\%$$

The effective marginal tax rate for Sunlord is:

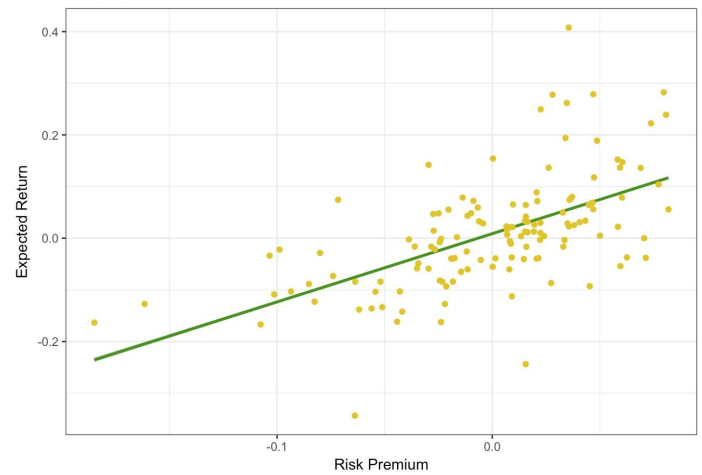
$$T_C = 9.5\%$$

### (3) CAPM

We set Shanghai Interbank Offered Rate (SHIBOR) as risk-free interest rate, which is:

$$R_f = 3.391\%$$

We estimate  $\beta_E$  by regression analysis. By calculating the correlations between percentage change of Sunlord' stock price and percentage change of CSI 300 from historical returns from Dec 29, 2016 to Dec 28, 2021, it can be obtained that the value of  $\beta_E$  is about 1.515.



Target Index	Time Horizon	$\beta_E$	$R^2$	Points of observation
CSI 300	2016/12/29-2021/12/28	1.515	0.4813	151

For  $E(R_M)$ , we calculate the geometric average return of CSI 300 index in the last five years.

$$R_M = 10.96\%$$

Use CAPM to calculate  $R_E$ :

$$R_E = R_f + \beta_E (R_M - R_f) = 14.86\%$$

We finally find Sunlord's WACC to be:

$$WACC = W_D \times R_D \times (1 - T_C) + W_E \times R_E = 11.7275\%$$

## 2. DCF Valuation Model

To find the probable stock price of Sunlord Electronics in the future, we use the DCF Valuation Model. It's a valuation method which estimates the value of a firm based on its future cash flows. To find the firm value, DCF requires us to estimate the future cash flow first, which is the key step of the total process. Then the discount rate WACC needs to be determined, and finally we can calculate the firm value using the basic formula for the DCF valuation as below:

$$NPV_{2022} = \sum_{i=0}^4 \frac{FCFF_{(2022+i)}}{(1 + WACC)^i} + \frac{TV_{2026}}{(1 + WACC)^4}$$

To find the proper FCFF in the future, we suggest the following assumptions:

### **Assumption 1(On Sales Profitability): There is a taste of resurgence.**

Chinese government put up a dramatic turn-around on its former shut-down policy toward the prevailing corona virus Omicron, and there is a delightful taste of resurgence upon this tremendous economic Leviathan, though having been foggy and dull throughout passed 2021 and passing 2022. Therefore, Sunlord can rationally expect a 30 percent growth in coming 2023 on net sales, as its high dependence on the fiercely bouncing macroeconomic, while in September it estimated a 10 percent recession this year. From 2024 to the foreseeable future, Sunlord may make its way backing to normal track before the pandemic, maintaining an average growth of 15 percent or so as 2015-2019.



We conclude our estimate for the growth of sales revenue in the following table:

Year	2022	2023	2024	2025	2026
Growth Rate	-10%	30%	15%	15%	15%

### **Assumption 2 (On Asset Management): Just no reason to deteriorate.**

Sunlord displays a reasonable asset management through recent seasons. And based on its semiannual financial report, we acknowledge that it has made much effort to keep a fair asset management under macroeconomic thunderstorm clouds. Thus in the foreseeable future, it is not necessary to shed much anxiety on deterioration of its asset management and we just hold all 2021 asset-managing ratios invariant. These ratios are listed below:

COGS	64% of Net Sales
Sales Expense	1% of Net Sales
Operating Expense	5% of Net Sales
Inventory Turnover	2.80
Receivables Turnover	3.22
Payable Turnover	6.51
Cash	10.78% of Net Sales
Accrued Expense	5.66% of Net Sales

### **Assumption 3 (On Capital Budgeting): Expansion rapid and unstoppable, though solid and robust.**

Throughout former-pandemic era Sunlord has maintained an amazing growth speed on fixed asset, annually above 10 percent, grabbing substantial market share from its competitors. When the policy turn-around bleed away all the long frustration, Sunlord will again become a Porsche with no brakes, as invincible as once it was. Thus on gross fixed asset we expect invariance in the dooming 2022 and 10 percent annual growth in the foreseeable future, and depreciation simply goes proportionally with gross fixed asset.

We conclude our estimate for Capital Budgeting in the following table:

Year	2022	2023	2024	2025	2026
Growth in Fixed Asset	0	10%	10%	10%	10%
Depreciation: 0.71% of Gross Fixed Asset					

### Assumption 4(Long-term Forecasting): Steady overall growth.

We may feel so remote when it comes to 2027 and years after that. Little can be told about the misty profound future besides “in the long run we are all dead”. Conservatively, we just let the history experience overwhelm, forecasting a 16 percent overall annual growth on FFCF from 2027 to 2031, just as 2015-2019 displayed, and a permanent steady growth of 6 percent later.

We conclude our estimate for the long-term growth in the following table:

Year	2027	...	2031	2032	...
Growth in FCFF	16%	16%	16%	6%	6%

Using the two-stage growth model, we can calculate  $TV_{2026}$  as follows:

$$TV_{2026} = FCFF_{2026} \times \frac{1 + g_1}{WACC - g_1} \times (1 - (\frac{1 + g_1}{1 + WACC})^5) + FCFF_{2026} \times (\frac{1 + g_1}{1 + WACC})^5 \times \frac{1 + g_2}{WACC - g_2}$$

Below is the pro forma statement of FCFF:

Year	2022	2023	2024	2025	2026
Net Sales	4119585765	5355461495	6158780719	7082597827	8144987501
COGS	2636534890	3427495357	3941619660	4532862609	5212792001
Other expenses	247175146	321327690	369526843	424955870	488699250
Depreciation	26597039	29256743	32182418	35400660	38940726
EBIT	1209278690	1577381705	1815451798	2089378689	2404555525
Operating Cash Flow	1120994254	1456787186	1675166295	1926288373	2215063475
Change in NWC	-150665200	545593528	408635820	448815111	516137378
Capital Expenditure	0	374606190	412066809	453273490	498600839
FCFF	1271659454	536587469	854463666	1024199772	1200325259
PV	1271659454	480264455	684499977	734352252	770297735
TV (Discounted to 2022)	24772924683.09				
NPV(Total)	28713998556.92				
MV(Debt)	3891415927				
NPV(Equity)	24822582629.92				

$$\text{Stock Price} = \frac{\text{NPV(Equity)}}{\text{\# of Outstanding Shares}} = \frac{24822582629.92}{798543029} = 31.08$$

## V. Conclusion

We believe that Sunlord’s stock price is currently undervalued, and that its actual price should be 31.08, which is 22% above its current market price. And Sunlord Electronics is bound to enjoy business prosperity in the upcoming EV era.

**So the investment rating of Shenzhen Sunlord Electronics Co.,Ltd. (002138.SZ) is:**

**BUY.**