

# Analysis of Tax Risk Management and Control in Port Machinery Manufacturing Industry--Taking Enterprise S as an Example

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**Abstract.** Port machinery manufacturing has a long history in China and plays an important role in promoting the country's economic progress. Advanced port machinery not only enhances the ability of ports to handle goods, but also effectively cuts down on logistics expenses, thus solidly supporting the country's economic pulse. Against this background, preventing and dealing with the VAT tax risks faced by the port machinery manufacturing industry and improving tax compliance of taxpayers have become key issues. In this paper, a port machinery manufacturing enterprise in the stage of product upgrading and transformation is selected as the research object, and 2020 is taken as the benchmark, focusing on the tax situation of the enterprise in 2021 and 2022. In the case study of this enterprise, this paper adopts a tax-related risk model and longitudinal data analysis within the enterprise to identify in-depth the value-added tax (VAT) and corporate income tax (CIT) risks of the port machinery manufacturing enterprise, as well as the tax-related risks of the enterprise's investment and merger and acquisition business, so as to control the enterprise's tax risks and promote the sustainable development of the enterprise.

**Keywords:** Port machinery manufacturing; tax risks; tax-related risk modelling; mergers and acquisitions.

## 1. Introduction

Port machinery manufacturing industry has a long history of development in China, and has an important supporting role for the country's economic development. As the window of the country's opening up to the outside world, the port is the key node of international goods circulation and supply chain. The development and operation ability of port machinery is directly related to the efficiency and quality of goods flow. Efficient port machinery can increase the cargo throughput of ports, reduce logistics costs, and provide strong support for the country's economic development. How to prevent and cope with the VAT tax risk of port machinery manufacturing industry and improve the tax compliance of taxpayers have become the top priority of tax authorities.

In this paper, we take a large port machinery manufacturing enterprise in the process of product upgrading and transformation as an example; with the target enterprise 2020 as the base period, we focus on analysing the tax-related situation of the target enterprise in 2021 and 2022. In the process of enterprise case study, we try to analyse and investigate the tax-related risk suspicions of the enterprise from the dimensions of tax-related risk model and internal longitudinal data of the enterprise.

## 2. Overview of tax risk research

Firstly, in terms of the definition of tax risk, Cozmei defines tax risk as the tax risk faced by taxpayers when they are unsure about future tax planning, accurate tax calculation and compliance with relevant tax laws<sup>[1]</sup>. Bai Yanfeng suggests that tax risk is a governmental economic risk, and in the face of a variety of gradually prominent problems and increasingly acute contradictions, the use of tax policy and the tax policy's own provisions can have an impact on the country's economic security<sup>[2]</sup>. Wang Wenqing and Yao Qiaoyan believe that the tax risk is due to the taxpayer's failure to strictly comply with the state's tax laws and related regulations, thus resulting in the loss of the

state's tax revenues, or there is an unpredictable possible deterioration of the tax situation, mainly refers to the taxpayer's compliance risk <sup>[3]</sup>.Wunder argues that in the collection process of the tax authorities, maximum collection results are achieved at minimum cost <sup>[4]</sup>.BraiThwaiTe has systematically classified tax risks. In his opinion, tax risks can be specifically categorised as compliance risks, enforcement risks, tax source risks and foreign-related risks, etc. <sup>[5]</sup>.

Secondly, in terms of the role of tax risk management on tax collection and management. Ye Jianfang consider tax risk management as a way to strategically plan, identify and rank risks for the purpose of tax compliance, respond to them and evaluate their performance. <sup>[6]</sup>.Elmirzaev points out that the identification and assessment of tax risks is the key to tax risk management, and its degree of accuracy has a great correlation with the success or failure of tax risk management, therefore, it is necessary to reshape and promote tax compliance as the main purpose, and to build a new type of tax management system with excellent tax services, timely risk monitoring, and risk response, which has become the development trend of tax reform <sup>[7]</sup>.Segal et al. proposed that risk management methods should be applied to the actual work of tax collection and management, which is is useful for constructing a tax risk management system that is compatible with the actual situation of the country <sup>[8]</sup>.Booyesen proposed a tax risk management strategy, which can effectively identify and rank high-risk items to better reduce the possible tax burden <sup>[9]</sup>.

At present, the research on tax risk management has certain achievements, but there are still some shortcomings, such as the limitations of the research direction, the feasibility of the programme, etc., and there are more existing articles discussing the importance of enterprise tax risk management, risk management ideas, etc., but there are relatively few articles that really go deep into the enterprise, especially in the port machinery manufacturing enterprises, to study how to carry out tax risk management in a concrete way. The new economic environment and tax situation have brought a lot of difficulties to the enterprises. The new economic environment and tax situation bring more challenges to enterprise tax risk management. Therefore, this paper will take enterprise S as an example to study and analyse the tax management of port machinery manufacturing enterprises, to provide reasonable and effective tax risk management solutions for enterprise S, and also to provide reference and inspiration for other enterprises in the same industry.

### **3. The significance of tax risk management of port machinery enterprises**

At present, the port machinery industry is facing a large tax risk and needs to strengthen the tax risk management and control. By establishing a perfect tax policy system, strengthening tax supervision and enhancing cooperation and communication, we can effectively reduce tax risks, promote the healthy and sustainable development of the port machinery industry, and at the same time protect the normal collection of national taxes.

For the country, port machinery industry as an important economic pillar, the contribution of national revenue can not be ignored. By strengthening tax management, it can regulate the tax behaviour of enterprises, ensure the normal collection of taxes, stabilize the national financial income, and provide sustainable financial support for the country.

For enterprises, compliant tax management can help them clearly understand tax laws and regulations, reasonably plan taxes, avoid financial risks, and reduce economic losses that may be caused by tax penalties and disputes. Strengthening tax compliance capability not only helps enterprises' long-term development, but also enables them to seize the advantage in market competition and gain more business opportunities.

### **4. Analysis of Tax-Related Risk Models for Port Machinery Enterprises**

Common tax analysis indicators and early warning values for the port machinery manufacturing industry are shown in Table 4-1:

Table 4-1 Tax analysis indicators and early warning values

No.	Indicator	Early Warning Value
1	Profitability of main business	20%
2	Enterprise income tax liability	2%
3	Elasticity coefficient between the rate of change in profit from main business and the rate of change in revenue from main business	Normally, the two change in tandem
4	Change rate of cost of main business	>Rate of change in operating income
5	Elasticity coefficient between the rate of change in revenue from main business and the rate of change in revenue from main business	Normally, the two change synchronously with a ratio close to 1
6	Elasticity coefficient between the rate of change in expenses and the rate of change in income from operations	Normally, the two change in tandem
7	Change in advance receipts Other receivables	>10%
8	Change in other accounts payable	>10%
9	VAT liability	>10%
10	Deviation of VAT liability	3.5%
11	Change in VAT taxable income	>20%
12	Change in output tax for the year	<Rate of change in taxable income
13	Change in input tax for the year	>Rate of change in output tax
14	Inventory deduction ratio	>13%

Specifically for this case, the analysis is as follows:

#### 4.1 Analysis of corporate income tax indicators

The data of each index of Company S in 2021 and 2022 are shown in the table 4-2.

S Company's profit margin from main business in 2021 and 2022 is slightly lower than the industry warning value, and the corporate income tax liability in 2022 is slightly lower than the industry warning value, and there may be corporate income tax risk, which is analysed below in conjunction with other data indicators and the risk model.

##### 4.1.1 Analysis of the coefficient of elasticity between the rate of change in revenue from operations and the rate of change in profit from operations

The model mainly reflects the correlation between main operating revenue and main operating profit, which should grow and decline in tandem under normal operating conditions.

When the following three situations occur, there may be a risk of undercounting revenue.

- When the ratio is  $<1$  and the difference is large and both are negative.
- When the ratio is  $>1$  and the difference is large and both are positive.
- When the ratio is negative and the former is positive and the latter is negative.

In this case, S Company's main business revenue and main business profit show a downward trend at the same time; the trend of profit decline is smaller than the trend of revenue decline, the overall trend is normal.

However, the ratio of 640 per cent in 2021 reflects a significant decline in revenue and a substantial increase in the year-end balance of the accounts receivable account, which is rather unusual.

Therefore, subsequent attention should be paid to whether there is a risk of underaccounting for revenue in accounts receivable for S Company.

Table 4-2 Data for indicators in 2021 and 2022

No.	Indicator	2021	2022	Early warning value
1	Profit margin of main business	19.68%	19.41%	20%
2	Enterprise income tax liability	2.96%	1.68%	2%
3	Change rate of profit from main business	-1.58%	-1.38%	——
4	Change rate of main business income	-10.10%	-1.87%	——
5	Elasticity coefficient between the rate of change in profit from main business and the rate of change in main business income	640%	135%	Normally, the two change in tandem
6	Rate of change in cost of main business	-9.74%	-1.54%	>Rate of change in operating income
7	Elasticity coefficient between the rate of change of cost of main business and the rate of change of main business income	94.51%	82.26%	Normally, the two change synchronously with a ratio close to 1
8	Rate of change of expenses	-34.82%	-51.7%	——
9	Elasticity coefficient between the rate of change of expenses and the rate of change of income from main operations	327%	2759%	Normally, the two change in tandem
10	Change in advance receipts	363336%	-56.04%	>10%
11	Change in other receivables	-4.78%	-12.89%	>10%
12	Change in other accounts payable	-18.14%	-8.73%	>10%

#### 4.1.2 Coefficient of elasticity of the rate of change in revenue from operations over the rate of change in costs of operations

When the following three situations occur, there may be a risk of overcosting suspicion.

- When the ratio is <1 and the difference is large and both are negative.
- When the ratio is >1 and the difference is large and both are positive.
- When the ratio is negative and the former is positive and the latter is negative.

In this case, S Company's revenue and cost fall synchronously and the ratio coefficient is close to one. Through this risk model, no risk suspicion of overcosting is found in S Company.

### 4.1.3 Coefficient of elasticity of the rate of change in income from operations over the rate of change in expenses

The model mainly reflects the correlation between the main operating income and the three expenses, which should grow and decline in tandem under normal operating conditions. There may be a risk of over-expenditure when the following three situations occur.

- When the ratio is  $<1$  and the difference is large and both are negative.
- When the ratio is  $>1$  and the difference is large and both are positive.
- When the ratio is negative and the former is positive and the latter is negative.

In this case, the main operating income and expenses of Company S show a downward trend at the same time, but the data of 2022 is abnormal, which should be analysed together with the "rate of change of main operating expenses".

The fluctuation of the rate of change of main operating expenses of Company S in 2021 and 2022 is very large, and there is a risky suspicion in terms of expenses.

Therefore, we should pay attention to the details of Company S's three expenses and further analyse whether there is a risk of over-accounting for expenses in conjunction with the longitudinal analysis of the company's expense data from period to period.

## 4.2 Analysis of VAT indicators

The data for the indicators of S Company for the years 2021 and 2022 are shown in the table below:

Table 4-3 Data for indicators for 2021 and 2022

No.	Indicator	2021	2022	Early warning value
1	VAT liability	2.13%	2.84%	3.5%
2	VAT liability deviation	39.81%	18.47%	$>20\%$
3	VAT taxable income variation	-10.31%	-1.56%	—
4	Change in annual output tax	-19.67	-5.95%	$<\text{Rate of change in taxable income}$
5	Change in input tax for the year	-16.5%	-43.57%	$>\text{Rate of change in output tax}$
6	Inventory tax deduction ratio	13.05%	12.75%	$>13\%$

### 4.2.1 Analysis of VAT liability

Company S's VAT liability for the two years 2021 and 2022 is low compared to the same industry. Combining the two indicators of "VAT liability" and "tax liability deviation", the tax liability for the year 2021 is low and the deviation exceeds the early warning value, which is risky and suspicious, and should be regarded as the year of key attention.

### 4.2.2 Analysis of the rate of change in annual sales tax

It can be seen from the above data that the decrease in the "rate of change in output tax" of Company S in 2021 and 2022 is greater than the "rate of change in taxable income"; however, considering that this case uses the data of Company S in 2022 as the base period, the following should be excluded from the analysis. However, considering that this case is based on the data of Company S in 2022, the impact of the change in VAT rate in the relevant period should be excluded from the analysis.

After excluding the effect of the change in the tax rate, the rate of change in output tax and the rate of change in taxable income of the enterprise are as follows:

Table 4-4 Indicator data for 2021 and 2022, excluding the effect of tax rate changes

No.	Indicator	2021	2022	Early warning value
1	Rate of change in VAT taxable income	-11.67%	-1.68%	——
2	Annual rate of change in sales tax (revised)	-11.67%	-1.68%	<Rate of change in taxable income

After the correction, the correlation between the indicators "change in sales tax rate" and "change in taxable income rate" of Company S is normalised.

#### 4.2.3 Analysis of the rate of change in input tax for the year

The "input tax rate" should be analysed in conjunction with the "output tax rate" and the "inventory deduction ratio".

Company S's "inventory deduction ratio" for 2021 and 2022 is relatively normal.

However, the "input tax rate" in 2021 is much larger than the "output tax rate", and in combination with the low VAT rate in 2021, the preliminary assessment is that there is a risk suspicion for VAT in 2021, which should be paid attention to.

## 5. Analysis of the current financial situation of the case company

### 5.1 Basic Corporate Information

S Port Machinery Manufacturing Co., Ltd (S Company) is a wholly foreign-owned enterprise established by an American company in 2009, whose main business is port machinery, piling machinery, wind power equipment and petroleum equipment.

Company S implements enterprise accounting standards and is a VAT general taxpayer, with a VAT rate of 13% applicable from 1 April 2021 and an enterprise income tax rate of 25% applicable; other taxes involved on a day-to-day basis include property tax, land use tax and stamp duty.

### 5.2 Business Overview

Since its establishment, the main products of S Company are traditional large port machinery and equipment. It is characterised by high unit value and long service life; stable customers, mainly large ports and shipping enterprises, transport and logistics companies in China, supplemented by a small amount of business from overseas port construction and shipping companies.

The major raw materials of S Company include copper wire, steel, aluminium alloy, electrical components, rubber, plastic, lubricating oil and hydraulic oil. As the market prices of some of the raw materials are highly volatile, S Company has been maintaining a certain amount of safety stock in order to reduce risks.

### 5.3 Key financial data

See Tables 5-1, 5-2, 5-3 for details of S Company's balance sheet, income statement, and cash flow statement for 2020, 2021, and 2022.

Table 5-1 Balance Sheet

Project	2022	2021	2020
Current assets:	—	—	—
Monetary funds	84,206,057	158,128,207	64,378,502
Accounts receivable	1,252,373,697	1,443,444,951	1,666,551,168
Other receivables	96,719	111,026	116,597
Inventories	1,286,527,172	1,422,672,526	852,838,708
Other current assets	3,565,260	32,333,953	47,272
Total current assets	2,626,768,907	3,056,690,665	2,583,932,250
Non-current assets:	—	—	—
Long-term equity investments	78,000,000	88,000,000	
Original cost of fixed assets	235,533,163	167,693,096	139,332,911
Less: Accumulated depreciation	111,444,786	100,206,068	92,121,700
Net fixed assets	124,088,377	67,487,028	47,211,211
Net fixed assets	124,088,377	67,487,028	47,211,211
Construction in progress	6,252,737	21,127,488	21,955,772
Intangible assets	9,796,262	10,215,968	5,550,747
Development expenditure		97,087.38	
Long-term amortisation	763,045	1,894,539	1,008,162
Deferred tax assets	56,646,632	99,767,812	88,455,509
Total non-current assets	275,547,056	288,589,924	164,181,403
Total assets	2,902,315,963	3,345,280,590	2,748,113,653
Current liabilities:	—	—	—
Short-term borrowings	852,819,101	845,497,727	720,236,184
Accounts payable	1,051,448,888	1,422,652,947	973,396,683
Receipts in advance	2,588,154	5,887,665	1,620
Employee compensation payable	15,060,089	20,174,271	20,459,955
Taxes payable	34,677,487	25,120,399	68,412,064
Interest payable	2,950,292	1,383,821	494,992
Other payables	1,180,724	1,283,332	1,567,724
Total current liabilities	1,960,724,736	2,322,000,166	1,784,569,225
Non-current liabilities:	—	—	—
Projected liabilities	348,259,694	406,221,882	357,891,356
Total non-current liabilities	348,259,694	406,221,882	357,891,356
Total liabilities	2,308,984,430	2,728,222,048	2,142,460,581
Owners' equity (or shareholders' equity):	—	—	—
Paid-in capital (share capital)	100,000,000	100,000,000	100,000,000
Surplus reserves	105,097,333	94,939,927	73,685,161
Undistributed profit	388,234,199	422,118,614	431,967,911
Total owners' equity attributable to the parent company	593,331,532	617,058,541	605,653,072
Total owners' equity	593,331,532	617,058,541	605,653,072
Total liabilities and owners' equity	2,902,315,963	3,345,280,590	2,748,113,653

Table 5-2 Cash flow statement

<b>Statement of cash flows</b>				
Project	Line	Amount(2020)	Amount(2021)	Amount(2022)
I. Cash flows from operating activities:	1	—	—	-
Cash received from sales of goods and services	2	1,104,739,674	1,544,443,464	1,559,124,122
Tax refunds received	3	8,680,727	8,579,148	7,537,441
Other cash received related to operating activities	4	11,007,664	7,053,324	6,790,026
Subtotal of cash inflow from operating activities	5	1,124,428,067	1,560,075,937	1,573,451,590
Cash paid for purchases of goods and services	6	961,202,004	1,242,309,846	1,209,034,670
Cash paid to and for employees	7	74,661,811	121,455,893	111,619,195
Taxes paid	8	198,969,625	204,756,155	106,852,499
Cash paid for other operating activities	9	91,487,282	67,591,592	88,561,500
Subtotal of cash outflows from operating activities	10	1,326,320,721	1,636,113,487	1,516,067,865
Net cash flows from operating activities	11	-201,892,654	-76,037,549	57,383,725
II Cash flows from investing activities:	12	—	—	-
Cash received from recovery of investments	13	40,000,000	0	0
Cash received from obtaining investment income	14	13,277	0	4,000,000
Net cash recovered from disposal of fixed assets, intangible assets and other long-term assets	15	61,887	69,911	3,097
Subtotal of cash inflow from investing activities	16	40,075,164	69,911	4,003,097
Cash paid for acquisition and construction of fixed assets, intangible assets and other long-term assets	17	40,656,810	44,771,275	59,560,400
Cash paid for other investing activities	18	2,364,615	0	0
Subtotal of cash outflows from investing activities	19	43,021,425	44,771,275	59,560,400
Net cash flows from investing activities	20	-2,946,260	-44,701,363	-55,557,302
III. Cash flows from financing activities:	21	—	-	-
Cash received from obtaining loans	22	238,661,701	256,205,495	8,518,925
Subtotal of cash inflow from financing activities	23	238,661,701	256,205,495	8,518,925
Cash paid for distribution of dividends, profits or interest repayment	24	18,303,496	41,673,781	84,133,628
Subtotal of cash outflow from financing activities	25	18,303,496	41,673,781	84,133,628
Net cash flows from financing activities	26	220,358,205	214,531,713	-75,614,703
IV. Effect of exchange rate changes on cash and cash equivalents	27	-618,537	-43,096	-133,870
V. Net increase in cash and cash equivalents	28	14,900,753	93,749,704	-73,922,149
Add: Opening balance of cash and cash equivalents	29	49,477,750	64,378,503	158,128,207
VI. Balance of cash and cash equivalents at the end of the period	30	64,378,503	158,128,207	84,206,058



Table 5-3 Income Statement

Project	2022	2021	2020
I. Total operating income	1,246,869,836	1,257,582,107	1,412,480,099
Of which: Operating income	1,246,869,836	1,257,582,107	1,412,480,099
Of which: Revenue from main business	1,224,011,049	1,247,380,770	1,387,477,288
Other business income	22,858,787	10,201,336	25,002,810
II. Total operating costs	1,172,135,829	1,177,360,721	1,387,068,781
Including: Operating costs	1,016,475,340	1,005,047,925	1,122,217,943
Of which: Main business costs	986,399,519	1,001,840,070	1,109,981,830
Other business costs	20,075,821	3,207,854	12,236,113
Business taxes and surcharges	3,181,530	2,069,262	1,661,813
Selling expenses	13,386,357	108,117,425	193,023,764
Administrative expenses	46,043,457	40,364,769	34,537,375
Finance costs	24,011,730	24,262,225	30,700,518
Of which: Interest expense	26,760,997	18,669,329	12,812,122
Interest income	-934,362	-306,166	-2,794,151
Net foreign exchange loss	-1,982,855	5,570,768	20,351,247
Impairment loss on assets	79,037,412	-2,500,886	4,927,366
Add: Gain on change in fair value			
Gain on investments	-6,000,000	8,000,000	13,277
III. Operating profit	68,734,007	88,221,386	25,424,594
Add: Non-operating income	5,736,785	26,682,055	2,727,492
Less: Non-operating expenses	117,719	231,370	2,055,813
Total profit	74,353,072	114,672,071	26,096,273

## 5.4 Key tax data

Taxes paid by S Corporation in 2022 and 2021 for S Corporation's major taxes (in millions of RMBs) are as follows:

Table 5-4 Major Taxes Paid by S Corporations in 2022 and 2021

Project	2022	2021
corporate income tax	3,726.83	2,294.67
value-added tax (VAT)	2,694.42	3,545.41
property tax	20.03	30.23
land use tax	10.67	10.67
non-residential property	52.34	42.39
personal income tax	256.04	253.65

S Corporation's major tax liabilities for 2022 and 2021 are shown in the table below:

Table 5-5 Major Tax Burden in 2022 and 2021

Project	2022	2021
Corporate income tax liability	2.96 per cent	1.84 per cent
VAT tax liability	2.13 per cent	2.84 per cent

See Tables 5-6 and 5-7 for details of S's 2021 and 2022 VAT returns (partial) and CIT returns (partial).

## 5.5 Longitudinal analysis of intra-enterprise data

By analysing S Company's financial data and related tax returns for the three years 2020, 2021 and 2022, we found that the following subjects fluctuated greatly, which may be risky and suspicious, and need to be the focus of subsequent investigation and analysis.

### 5.5.1 Construction in progress

Company S invests in a new factory in 2019, but the book value of the construction-in-progress account at the end of 2021 is basically the same as at the end of 2022, which is rather unusual, and attention should be paid to whether there is a situation in which a fixed asset has been completed but has not been carried forward.

### 5.5.2 Short-term borrowings

Through the aforementioned understanding of the business operation, S Company's liquidity has not been good, often through the bank for loans or factoring; however, checking the statement found that the enterprise's short-term borrowing account balance in all years are very high, far beyond the enterprise's owners' equity, which is rather abnormal and should be concerned.

In addition, S has made another investment in construction in progress in the relevant year, whether there is any borrowing related to the construction in progress and whether the interest on the borrowing is capitalised are also risky doubts that need to be paid attention to.

Table 5-6 S Corporation Corporate Income Tax Return and Selected Schedules

**Annual Enterprise Income Tax Return (Class A) of the People's Republic of China (excerpt)**

Affiliation period: 1 January 2021-31 December 2021			Amount in RMBs (columns to cents)
Line	form	Item	Amount
1		I. Operating income	1,257,582,107.71
2		Less: Operating costs	1,005,047,925.33
3		Business taxes and surcharges	2,069,262.79
4		sales expense	108,117,425.06
5		overheads	40,364,769.55
6	Total	financial cost	24,262,225.24
7	profit	Impairment losses on assets	-2,500,886.73
8	calculation	Add: Gain on change in fair value	-
9		investment income	8,000,000.00
10		II. Operating profit	88,221,386.47
11		Add: Non-operating income	26,682,055.90
12		Less: Non-operating expenses	231,370.79
13		III. Total profits	114,672,071.58
14		Less: foreign income	-
15		Add: increase in tax adjustments	106,479,312.53
16	Calculation of taxable income	Less: decrease in tax adjustments	60,866,308.45
17		Less: tax exemptions, income reductions and additional deductions	11,211,734.90
18		IV. Income after tax adjustments	149,073,340.76
19		V. Taxable income	149,073,340.76
20		Tax rate (25 per cent)	25 per cent
21		VI. Income tax payable (23 x 24)	37,268,335.19
22	Calculation of taxable amount	Less: Income tax deductions	-
23		Less: Income tax credits	-
24		VII. Taxes payable (25-26-27)	37,268,335.19
25		Add: Income tax payable on foreign income	-
26		Less: Income tax credit on foreign earnings	-
27		VIII. Actual amount of income tax payable (28+29-30)	37,268,335.19

**Schedule of pre-tax deductions and tax adjustments for asset losses (extract)**

Tax period: 1 January 2021 to 31 December 2021

Line	Project	Carrying amount of loss of assets 1	Tax basis of assets 2	Amount of tax on loss of assets 3
1	III. Inventory losses	7,017,285.52	7,017,285.52	7,017,285.52
2	Of which: Losses from inventory loss, obsolescence, destruction, deterioration or theft	7,017,285.52	7,017,285.52	7,017,285.52
3	Total	7,017,285.52	7,017,285.52	7,017,285.52

**Annual Enterprise Income Tax Return (Class A) of the People's Republic of China (excerpt)**

Tax period: 1 January 2022 to 31 December 2022

Amount in RMBs (columns to  
cents)

Line	form	Project	Amount
1		I. Operating income	1,246,869,836.96
2		Less: Operating costs	1,016,475,340.84
3		Business taxes and surcharges	3,181,530.36
4		sales expense	3,386,357.80
5		overheads	46,043,457.37
6		financial cost	24,011,730.87
7	Total profit calculation	Impairment losses on assets	79,037,412.24
8		Other gains	-6,000,000.00
9		Gain on disposal of assets	
10		II. Operating profit	68,734,007.48
11		Add: Non-operating income	5,736,785.03
12		Less: Non-operating expenses	117,719.85
13		III. Total profits	74,353,072.66
14		Less: foreign income	
15	Calculation of	Add: increase in tax adjustments	79,441,868.82
16	taxable	Less: decrease in tax adjustments	62,008,330.82
17	income	IV. Tax-adjusted income	91,786,610.66
18		V. Taxable income	91,786,610.66
19		Tax rate (25 per cent)	25 per cent
20	Calculation of	VI. Income tax payable	22,946,652.66
21	taxable	VII. Taxes payable	22,946,652.66
22	amount	VIII. Actual amount of income tax payable	22,946,652.66

Table 5-7 VAT Returns Main Table

VAT return (extract)				
Affiliation period: 1 December to 31 December 2021			Date of completion: 10 January 2022	
total income from sales	<b>Protect</b>	<b>column</b>	<b>General goods, services and taxable services</b>	<b>Number of months</b>
	(i) Sales taxed at the applicable tax rate	1		Cumulative for the year
	Of which: sales of taxable goods	2	68,270,504	1,266,348,339
	Sales of taxable labour	3	8,726,687	1,061,486,803
	sales tax	4	59,543,817	204,861,536
	input tax	5	8,875,649	172,343,996
	Prior-period tax credits	6	17,545,256	173,911,340
	Transfer of input tax	7	19,842,385	
	Total tax credits due	8	415.32	415.32
	Actual tax credits	9	37,387,227	--
	taxable amount	10	8,875,649	
	End-of-period tax credits	11		26,944,233.48
	deduction from taxable amount	12	28,511,578	280.00
	Total taxable	13		26,943,953.48

  

VAT return (extract)				
Affiliation period: 1 December to 31 December 2022			Date of completion: 10 January 2023	
total income from sales	<b>Protect</b>	<b>column</b>	<b>General goods, services and taxable services</b>	<b>Number of months</b>
	(i) Sales taxed at the applicable tax rate	1		Cumulative for the year
	Of which: sales of taxable goods	2	313,643,194	1,246,595,771
	Sales of taxable labour	3	99,617,208	915,484,110
	sales tax	4	214,025,985	331,111,660
	input tax	5	40,777,292	162,095,039
	Prior-period tax credits	6	11,320,730	98,145,195
	Transfer of input tax	7	1,404,524	
	Total tax credits due	8	366	15,886
	Actual tax credits	9	12,724,888	
	taxable amount	10	12,724,888	
	deduction from taxable amount	11	28,052,404	35,454,151
	Total taxable	12	280	280
			28,052,124	35,453,871

## 6. Analysis of tax-related risks of case enterprises

In the on-site research stage, based on the risk suspects circled in the desk analysis, the relevant business situation, current accounting treatment and tax treatment of Company S were investigated in a focused manner; and analyses were carried out in accordance with the current tax policies and regulations to finally determine whether there were any tax-related risks in the enterprise.

### 6.1 Overheads

#### 6.1.1 Relevant business situation

We have on-site access to S Company's three-year overhead ledger for the years 2022, 2021, and 2020. The specific data (in millions of RMBs) are as follows:

Table 6-1 Breakdown of administrative expenses

subsidiary ledger	2022 (base period)	2021	2020
Total overheads	3,453	4,036	5,604
remuneration of employees	1,239	1,409	1,543
Business hospitality	25	48	22
R&D costs	911	605	481
Losses on destruction of inventories	0	701	0

In particular, the significant amount of inventory destruction losses in 2021 caught our attention.

It was found that the loss was caused by the warehouseman's mismanagement of the inventory, which resulted in the deterioration of some of the hydraulic fluid materials beyond their expiry date.

Accounting treatment:

It was discovered during S's inventory at the end of December 2021 and was scrapped after fulfilling internal approval procedures.

Tax treatment:

S has filed a return for this loss on its annual corporate income tax return and has retained it in the relevant pro forma.

However, S did not calculate the input tax reversal on the loss for the purposes of its VAT treatment.

#### 6.1.2 Tax-related risk analysis

Input tax reversal should be calculated on the amount of loss incurred by S Company due to expiry and deterioration of raw materials as a result of mismanagement.

It was found that the inventory was purchased in February 2022, and the inventory loss amounted to ¥7.01 million, with a transfer out of ¥1.19 million based on a 17% tax rate.

As a result, S should declare this transfer out in the month of the loss, i.e. December 2021, and consequently reduce the closing retention carried forward from the end of December 2021 to the next period by ¥1.19 million; and ultimately affect the enterprise's VAT return in February 2022, which is subject to a back VAT tax and surcharge of ¥1.33 million.

S should amend the VAT returns for December 2021, January 2022 and February 2022 with the tax authorities as soon as possible, and pay the VAT tax, surtax and late fees as soon as possible.

### 6.2 Finance costs and short-term borrowings

#### 6.2.1 Relevant business situation

By reviewing Company S's income statement and financial expense account ledger, we learn that Company S's interest expenses are all derived from interest on short-term bank loans, and bank factoring fees. At the same time, the interest on borrowings incurred for the construction of the new factory building during the construction period of the new factory building of Company S has been capitalised.

In addition, our detailed understanding of S's financing revealed that S had contracted for a RMB 300 million one-year credit line with Citibank USA under the guarantee of its shareholders, with an agreed deferral at maturity. As agreed in the contract, the guarantee provided by the shareholders is subject to joint and several liability.

Company S has always believed that the contract for this line of credit was signed with a bank and that all borrowings actually incurred under the contract should be unrelated party borrowings, therefore, when calculating the debt-to-equity ratio of related party borrowings each year, it has never counted the borrowings under the line of credit as related party creditor investments; it has also never adjusted the processing of interest.

### **6.2.2 Tax-related risk analysis**

After recalculation, S Company's related debt investments in 2021 and 2022 are RMB290 million and RMB280 million respectively; S Company's equity investments in 2021 and 2022 are over RMB500 million, and the debt-to-capital ratios of the past years have not exceeded 2:1, and there is no pre-tax deduction of interest on weakened capital for S Company.

However, there is an error in the filing of the related transaction returns of S Company for 2021 and 2022, and an application for amendment should be submitted to the tax authorities in a timely manner.

## **6.3 Construction in progress**

### **6.3.1 Relevant business situation**

We went through the balance sheet of S Company and found that the difference between the balance at the end of 2021 and the balance at the end of 2022 in the construction in progress account was not significant. For this reason we did a detailed investigation at the site.

It was found that Company S started to build a new factory building in 2019 for a new product; it signed a building construction contract with a contractor with a contract budget of ¥16 million.

In March 2022, the new workshop of Company S passed the final accounts of completion and obtained the certificate of registration of property rights. However, in fact, the new workshop was actually put into use in December 2022, but due to fire safety reasons, the completion procedures were delayed in obtaining approval and the certificate of registration of house ownership was not obtained.

Accounting treatment:

In 2021, S Company did not carry forward the construction in progress and did not depreciate it because the final accounts had not been completed and the certificate of title registration had not been obtained; after obtaining the certificate of title registration, depreciation was started in April 2022 with a depreciation period of 20 years and a residual value of 10 per cent.

Tax treatment:

After the construction contract was signed, S Company paid stamp duty calculated on the budgeted amount signed in the contract; S Company started calculating the property tax from after April 2022 onwards.

### **6.3.2 Tax-related risk analysis**

It was confirmed that the finalised value of the new factory building of Company S was RMB 16.19 million, and that Company S should calculate the payment of property tax from January 2021, but in fact started to pay property tax from April 2022, and there was underpayment of property tax by Company S.

The amount of property tax underpayment by S is estimated to be approximately ¥170,000.

## 7. Conclusion

### 7.1 Assessment of findings

There are corporate income tax issues for S corporations:

Incorrect filing of related transaction returns for 2021 and 2022;

There are VAT issues with S companies:

The amount of loss arising from the expiry and deterioration of raw materials due to mismanagement by S Company has not been calculated as input tax carry forward.

This resulted in an underpayment of VAT and surtax of ¥1.33 million.

Property tax issues exist for S corporations:

The delayed payment of property taxes on the newly constructed plant resulted in an underpayment of ¥170,000 in the amount of property taxes.

### 7.2 Case summaries and insights

An analysis of the taxation of this port machinery S-company can provide some insights as follows:

I Tax costs affect competitiveness: Tax costs are one of the major costs of business operations. Port machinery enterprises need to assess and control tax costs to improve competitiveness. This can include optimising tax structures, rationally planning tax planning, and reducing tax risks.

II International tax policies and compliance requirements: Port machinery enterprises are often involved in international markets and cross-border transactions. Therefore, it is crucial to understand and follow international tax policies and compliance requirements in order to avoid tax risks and legal disputes.

In conclusion, tax risk management can help port machinery enterprises to carry out reasonable planning and risk control in taxation so as to promote sustainable development and competitiveness of enterprises. Enterprises should pay close attention to changes in tax policies, make reasonable use of tax incentives and comply with tax regulations in order to achieve stable growth and sustainable development.

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