
THIS CIRCULAR IS IMPORTANT AND REQUIRES YOUR IMMEDIATE ATTENTION

If you are in doubt as to any aspect of this Circular or as to the action to be taken, you should consult your stockbroker or other registered dealer in securities, bank manager, solicitor, professional accountants or other professional adviser.

If you have sold or transferred all your shares in Zhejiang Expressway Co., Ltd., you should at once hand this Circular with the accompanying form of proxy to the purchaser or the transferee or to the bank, stockbroker or other agent through whom the sale or transfer was effected for transmission to the purchaser or the transferee.

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浙江滬杭甬高速公路股份有限公司
ZHEJIANG EXPRESSWAY CO., LTD.

(A joint stock limited company incorporated in the People's Republic of China with limited liability)
(Stock code: 0576)

**(1) POSSIBLE MAJOR TRANSACTION AND CONNECTED
TRANSACTIONS IN RELATION TO
THE CAPITAL INCREASE AND DEEMED DISPOSAL OF THE EQUITY
INTEREST IN SHANGSAN CO
AND
(2) NOTICE OF EXTRAORDINARY GENERAL MEETING**

**Independent Financial Adviser to
the Independent Board Committee and the Independent Shareholders of
Zhejiang Expressway Co., Ltd.**



A letter from the Board is set out on pages 5 to 16 of this Circular.

A letter from the Independent Board Committee is set out on page 17 of this Circular.

A letter from the Independent Financial Adviser containing its recommendations to the Independent Board Committee and the Independent Shareholders is set out on pages 18 to 40 of this Circular.

A notice for convening the extraordinary general meeting (the "EGM") of the Company to be held at 10 a.m. on October 11, 2022 at 5/F, No. 2 Mingzhu International Business Center, 199 Wuxing Road, Hangzhou City, Zhejiang Province, People's Republic of China is set out on pages EGM-1 to EGM-3 of this Circular.

A form of proxy for use at the EGM is enclosed. Whether or not you are able to attend the meeting in person, you are requested to complete and return the accompanying form of proxy in accordance with the instructions printed thereon. In case of H Shares, the proxy form should be lodged with the Company's H Shares Registrar, Hong Kong Registrars Limited, at 17M Floor, Hopewell Centre, 183 Queen's Road East, Wanchai, Hong Kong, not less than 24 hours before the time for holding the EGM (or any adjournment thereof). Completion and delivery of the form of proxy will not preclude you from attending and voting in person at the EGM or any adjournment thereof should you so wish.

September 21, 2022

CONTENTS

	<i>Page</i>
DEFINITIONS	1
LETTER FROM THE BOARD	5
LETTER FROM THE INDEPENDENT BOARD COMMITTEE	17
LETTER FROM THE INDEPENDENT FINANCIAL ADVISER	18
APPENDIX I – FINANCIAL INFORMATION OF THE GROUP	I-1
APPENDIX II – SHANGSAN VALUATION REPORT	II-1
APPENDIX III – TRAFFIC STUDY	III-1
APPENDIX IV – LETTERS FROM REPORTING ACCOUNTANTS IN RELATION TO THE SHANGSAN VALUATION REPORT AND THE LETTER FROM THE BOARD IN RELATION TO THE PROFIT FORECAST	IV-1
APPENDIX V – GENERAL INFORMATION	V-1
NOTICE OF EXTRAORDINARY GENERAL MEETING	EGM-1

DEFINITIONS

In this Circular, unless the context specifies otherwise, the following expressions shall have the meanings stated below:

“Amendment Decision”	the Decision to Amend the Provisions on Issues Concerning the Implementation of the Provisions on the Administration of Equities of Securities Companies* (關於修改《關於實施〈證券公司股權管理規定〉有關問題的規定》), promulgated by the China Securities Regulatory Commission in 2019 and amended in 2021
“associate(s)”	has the meaning ascribed to it under the Listing Rules
“Board”	the board of Directors
“Capital Increase”	the proposed capital increase by Communications Group and the Existing Shareholders in the aggregate amount of up to RMB13.17 billion, by way of cash, into the equity capital of Shangsans Co pursuant to the proposed Capital Increase Agreement
“Capital Increase Agreement”	the agreement proposed to be entered into between Shangsans Co, the Company, Communications Group and the Existing Shareholders in relation to the Capital Increase
“China Merchants”	China Merchants Expressway Network & Technology Holdings Co., Ltd.* (招商局公路網路科技控股股份有限公司), a company established in the PRC and a shareholder of Shangsans Co as at the Latest Practicable Date
“Circular”	this Circular to the Shareholders
“Communications Group”	Zhejiang Communications Investment Group Co., Ltd.* (浙江省交通投資集團有限公司), a wholly state owned enterprise established in the PRC, and the controlling shareholder of the Company
“Communications Group Capital Increase”	the proposed capital increase by Communications Group pursuant to the proposed Capital Increase Agreement
“Company”	Zhejiang Expressway Co., Ltd. (浙江滬杭甬高速公路股份有限公司), a joint stock limited company incorporated in the PRC with limited liability
“Completion”	the completion of the Capital Increase in accordance with the proposed Capital Increase Agreement
“connected person(s)”	has the meaning ascribed to it under the Listing Rules

DEFINITIONS

“controlling shareholder”	has the meaning ascribed to it under the Listing Rules
“COVID-19”	a viral respiratory disease caused by the severe acute respiratory syndrome coronavirus 2
“Deloitte”	Deloitte Touche Tohmatsu, the reporting accountants of the Company
“Director(s)”	the director(s) of the Company
“EGM”	the extraordinary general meeting of the Shareholders of the Company to be convened at 10 a.m. on Tuesday, October 11, 2022 at 5/F, No. 2 Mingzhu International Business Center, 199 Wuxing Road, Hangzhou City, Zhejiang Province, the People’s Republic of China to consider and approve, among other things, the proposed Capital Increase Agreement and the transactions contemplated thereunder, the notice of which is set on pages EGM-1 to EGM-3 of this Circular
“Existing Shareholders”	Shangyu Transportation, China Merchants and Tiantai State Capital, being the existing shareholders of Shangsang Co other than the Company as at the Latest Practicable Date
“Group”	the Company and its subsidiaries
“H Shares”	overseas listed foreign shares in the share capital of the Company with a nominal value of RMB1 per share, which are listed on the Main Board of the Stock Exchange and trade in Hong Kong dollars since May 15, 1997
“Hong Kong”	the Hong Kong Special Administrative Region of the PRC
“Independent Board Committee”	the independent committee of the Board, comprising all independent non-executive Directors, namely, Mr. Pei Ker-Wei, Ms. Lee Wai Tsang, Rosa and Mr. Chen Bin, to consider whether the terms of the proposed Capital Increase Agreement are on normal commercial terms, fair and reasonable and in the interest of the Company and Shareholders as a whole and to offer advice to Independent Shareholders in this regard
“Independent Financial Adviser” or “Octal Capital”	Octal Capital Limited, a corporation licensed to carry out Type 1 (dealing in securities) and Type 6 (advising on corporate finance) regulated activities under the Securities and Futures Ordinance, being the independent financial adviser appointed by the Company to advise the Independent Board Committee and the Independent Shareholders regarding the proposed Capital Increase Agreement and the transactions contemplated thereunder

DEFINITIONS

“Independent Shareholders”	Shareholders who do not have any material interest in the transactions under the proposed Capital Increase Agreement
“Independent Third Party”	a party independent of and not connected with the Company, any of its subsidiaries or any of its connected persons
“Jones Lang LaSalle”	Jones Lang LaSalle Corporate Appraisal and Advisory Limited
“Latest Practicable Date”	September 16, 2022, being the latest practicable date for ascertaining certain information contained in this Circular
“Listing Rules”	the Rules Governing the Listing of Securities on the Stock Exchange, as amended, supplemented or otherwise modified from time to time
“percentage ratio”	has the meaning ascribed to it under Rule 14.04(9) of the Listing Rules
“PRC”	the People’s Republic of China (for the purpose of this Circular, excludes Hong Kong, Macau and Taiwan)
“RMB”	Renminbi, the lawful currency of the PRC
“SFO”	Securities and Futures Ordinance (Chapter 571 of the Laws of Hong Kong)
“Shangsan Co”	Zhejiang Shangsan Expressway Co., Ltd.* (浙江上三高速公路有限公司), a company established in the PRC and a subsidiary of the Company
“Shangsan PRC Valuation Report”	the valuation report dated June 6, 2022 prepared by Tianyuan Asset Valuation Co., Ltd.* (天源資產評估有限公司) and commissioned by Shangsan Co in relation to the entire equity interest of Shangsan Co
“Shangsan Valuation Report”	the valuation report dated June 13, 2022 prepared by Jones Lang LaSalle in relation to the entire equity interest of Shangsan Co
“Shangyu Transportation”	Shaoxing City Shangyu District Transportation Group Investment Co., Ltd.* (紹興市上虞區交通投資有限公司), a company established in the PRC and a shareholder of Shangsan Co as at the Latest Practicable Date
“Shareholder(s)”	holder(s) of the share(s) of the Company
“Stock Exchange”	The Stock Exchange of Hong Kong Limited
“subsidiary(ies)”	has the meaning ascribed to it under the Listing Rules
“Supervisor(s)”	the supervisor(s) of the Company

DEFINITIONS

“Tiantai State Capital”	Tiantai State Capital Operation Co., Ltd.* (天臺縣國有資本運營有限公司), a wholly state owned enterprise established in the PRC and a shareholder of Shangsang Co as at the Latest Practicable Date
“WB Group”	WB Group International Limited
“Zhejiang SASAC”	State-owned Assets Supervision and Administration Commission of the People’s Government of Zhejiang Province of the PRC*(中國浙江省人民政府國有資產監督管理委員會)
“Zheshang Securities”	Zheshang Securities Co., Ltd.*(浙商證券股份有限公司), a company established in the PRC, a securities company in the PRC and is a 54.79% owned subsidiary of Shangsang Co as at the Latest Practicable Date
“%”	per cent.

* For identifications only.

LETTER FROM THE BOARD



浙江滬杭甬高速公路股份有限公司
ZHEJIANG EXPRESSWAY CO., LTD.

(A joint stock limited company incorporated in the People's Republic of China with limited liability)

(Stock code: 0576)

Chairman of the Company:

Mr. Yu Zhihong

Executive Directors:

Mr. Chen Ninghui

Mr. Yuan Yingjie

Non-executive Directors:

Mr. Jin Chaoyang

Mr. Fan Ye

Mr. Huang Jianzhang

Independent Non-executive Directors:

Mr. Pei Ker-Wei

Ms. Lee Wai Tsang, Rosa

Mr. Chen Bin

Registered Address:

12/F, Block A,

Dragon Century Plaza

1 Hangda Road

Hangzhou City, Zhejiang 310007

People's Republic of China

Principal Place of Business:

5/F., No. 2

Mingzhu International Business Center

199 Wuxing Road

Hangzhou

Zhejiang Province 310020

The People's Republic of China

September 21, 2022

To the Shareholders

Dear Sir or Madam,

**(1) POSSIBLE MAJOR TRANSACTION AND CONNECTED
TRANSACTIONS IN RELATION TO THE CAPITAL INCREASE AND
DEEMED DISPOSAL OF THE EQUITY INTEREST IN SHANGSAN CO
AND
(2) NOTICE OF EXTRAORDINARY GENERAL MEETING**

1. INTRODUCTION

The purpose of this Circular is, among other things, to give you notice of the EGM and to provide you with information in relation to the resolution to be proposed at the EGM to enable you to make an informed decision on whether to vote for or against those resolution at the EGM.

LETTER FROM THE BOARD

2. POSSIBLE MAJOR TRANSACTION AND CONNECTED TRANSACTIONS

Reference is made to the announcement of the Company dated June 15, 2022 in relation to, among other things, the proposed Capital Increase Agreement (the “**Announcement**”).

Shangsan Co, a direct non wholly-owned subsidiary of the Company and interested in approximately 54.79% of the issued share capital of Zheshang Securities, recently considered to raise additional equity capital in the aggregate amount of up to RMB13.17 billion to cater for the future business development needs and satisfy the mandatory regulatory requirements. Under the articles of association of Shangsan Co and the applicable PRC laws, its existing shareholders shall have the pre-emptive right in the event of a capital increase. As at the Latest Practicable Date, Shangsan Co is owned as to approximately 73.63% by the Company, 18.38% by China Merchants, 5.00% by Tiantai State Capital and 3.00% by Shangyu Transportation. The Company thus was invited to contribute approximately RMB9.70 billion to subscribe for approximately RMB1.76 billion new registered capital of Shangsan Co, which was determined on a pro rata basis with reference to its proportionate interest in Shangsan Co and the proposed scale of the Capital Increase. Nevertheless, having considered (a) the business plan to continue to focus on and further allocate resources in the transportation infrastructure industry, including acquiring more expressways and participating in expressways reconstruction and expansion projects in Zhejiang Province in the future; and (b) the need to maintain sufficient capital to meet the financial ratio usually required in investment in expressway projects, the Company proposed not to participate in the Capital Increase, intended to waive the pre-emptive right and introduce other strategic investor(s) in respect of the Capital Increase of Shangsan Co. Meanwhile, China Merchants, Tiantai State Capital and Shangyu Transportation would consider whether to participate in the Capital Increase proportionate to their respective shareholdings in Shangsan Co.

Subsequently, Shangsan Co considered to issue the untaken amount in the Capital Increase to a third party and invited Communications Group, as a strategic investor, to participate in the Capital Increase.

In light of the above arrangement, Shangsan Co, the Company, the Existing Shareholders and Communications Group proposed to enter into the proposed Capital Increase Agreement upon the approval of the Shareholders to increase the registered capital of Shangsan Co from approximately RMB5.38 billion up to the maximum amount of RMB7.77 billion.

Principal terms of the proposed Capital Increase Agreement are summarized as follows:

The Proposed Capital Increase Agreement

Parties:

- (i) Shangsan Co, a direct non wholly-owned subsidiary of the Company
- (ii) the Company
- (iii) the Existing Shareholders
- (iv) Communications Group

LETTER FROM THE BOARD

To the best of the Directors' knowledge, information and belief having made all reasonable enquiries, both Shangyu Transportation and Tiantai State Capital and their ultimate beneficial owners are third parties independent of the Company and its connected persons.

Pursuant to the proposed Capital Increase Agreement, the registered capital of Shangsans Co will be increased from approximately RMB5.38 billion up to the maximum amount of RMB7.77 billion, of which Communications Group and the Existing Shareholders will contribute in the aggregate amount of up to RMB13.17 billion for the Capital Increase. Communications Group shall subscribe for the new registered capital of approximately RMB1.76 billion, being the amount of new registered capital which the Company was originally entitled to subscribe and China Merchants, Tiantai State Capital and Shangyu Transportation shall subscribe for up to RMB0.44 billion, RMB0.12 billion and RMB0.07 billion new registered capital of Shangsans Co, respectively. In case there is any unsubscribed amount of new registered capital by the Existing Shareholders (if any), Communications Group will subscribe for such unsubscribed amount of new registered capital. The Company waived the pre-emptive right in respect of the Capital Increase and will not make any additional contribution to Shangsans Co under the proposed Capital Increase Agreement.

The Existing Shareholders shall obtain the approval from the board of directors of the holding company or the relevant state-owned assets supervision and administration authority (as applicable) to participate in the Capital Increase, ascertain the amount of new registered capital to be subscribed and notify Shangsans Co in a specific manner together with the provision of the relevant resolutions documentations on or before December 31, 2022, failing which the relevant Existing Shareholder shall be regarded as not fulfilling the pre-condition for the proposed Capital Increase Agreement and Communications Group shall be entitled to subscribe for such amount of new registered capital.

Basis of determination of the Capital Increase

The aggregate amount of Capital Increase to be made by Communications Group and the Existing Shareholders of up to RMB13.17 billion was determined after arm's length negotiations amongst the parties with reference to (i) the additional capital required to be raised to satisfy the regulatory requirements on the net assets of Shangsans Co set out in the paragraph headed "Reasons for and benefits of entering into the proposed Capital Increase Agreement" below; (ii) the Shangsans Valuation Report prepared by Jones Lang LaSalle and the Shangsans PRC Valuation Report prepared by Tianyuan Asset Valuation Co., Ltd* (天源資產評估有限公司) according to the requirements of Zhejiang SASAC and relevant PRC laws and regulations; (iii) due to the adoption of toll-free policy for all vehicles during the containment of COVID-19 in 2020, it is expected that there will be an additional toll collection rights period to be added on top of the original toll collection rights period of Shangsans Expressway (i.e. from December 26, 2000 to December 25, 2030) even though the exact length of the period is not certain and it was agreed between the parties that an additional appraised value is suggested to be added based on the additional toll collection rights period of 79 days; (iv) the dividend to be paid out by Shangsans Co to the Company and the Existing Shareholders (which has been paid out in September 2022); and (v) the future capital needs of Shangsans Co.

The aggregate amount of the Capital Increase is considered to be on normal commercial terms or better taking into account the above factors and with reference to the Shangsans Valuation Report prepared by Jones Lang LaSalle, pursuant to which the appraised value of the entire equity interest of Shangsans Co as at April 30, 2022 was approximately RMB26.88 billion (after deducting the aforementioned dividend payable).

LETTER FROM THE BOARD

Effective date and conditions precedent

Upon signing and affixing of the company chop thereon by the parties, the proposed Capital Increase Agreement will become effective upon:

- (i) the passing of shareholders resolution(s) in respect of the Capital Increase by Shangsans Co's shareholders;
- (ii) the Board having approved the resolution(s) in respect of the Capital Increase; and
- (iii) the Company having obtained the approval from the independent Shareholders in the general meeting in respect of the transactions contemplated under the proposed Capital Increase Agreement.

As at the Latest Practicable Date, condition (ii) stated above has been satisfied.

Completion of the proposed Capital Increase Agreement is conditional upon Shangsans Co having completed the filing in respect of the changes in shareholding structure, directors, supervisors, senior management (if applicable), articles of association, etc. and obtained the notification for approval for changes and the new business license within the specified period after the effective day of the proposed Capital Increase Agreement. Although Completion is not conditional upon the actual contribution of Communications Group for its subscribed amount, Communications Group will only be entitled to appoint directors to Shangsans Co and receive dividend after its full payment of the subscribed amount under the Capital Increase.

Payments of the Capital Increase

Subject to the proposed Capital Increase Agreement becoming effective, the payments of Capital Increase by Communications Group and the Existing Shareholders are expected to be made simultaneously on or before December 31, 2024, by way of bank remittance.

The payment period of the Capital Increase was determined with reference to the deadline for Shangsans Co to meet the net assets requirement under the Amendment Decision.

LETTER FROM THE BOARD

Nomination of directors and supervisors

As stated in the Announcement and based on the then proposed Capital Increase Agreement, Shangsans Co's board of directors shall consist of nine directors, four shall be appointed by the Company, two shall be appointed by Communications Group, two shall be appointed by China Merchants and one shall be appointed by Tiantai State Capital. Subsequent to the publication of the Announcement, the parties further negotiated on the director nomination rights and decided to amend the relevant provision in the proposed Capital Increase Agreement. Pursuant to the latest proposed Capital Increase Agreement, Shangsans Co's board of directors shall consist of nine directors, five shall be appointed by the Company, one shall be appointed by Communications Group, two shall be appointed by China Merchants and one shall be appointed by Tiantai State Capital. The chairman of the board of directors shall be elected by the board of directors of Shangsans Co.

Shangsans Co's board of supervisors shall consist of five supervisors, of which three shall be representatives of the shareholders and two shall be representatives of the employees.

Principal assumptions for the income approach adopted for the Shangsans Valuation Report

The appraised value of the entire equity interest of Shangsans Co under the Shangsans Valuation Report was prepared using the income approach, through the use of the discounted cash flow method. As a result, such valuation constitutes a profit forecast under Rule 14.61 of the Listing Rules.

Details of the key assumptions used in determining the value of the entire equity interest in Shangsans Co upon which the Shangsans Valuation Report was issued are set out below:

Major assumptions

- the continuation of prudent and effective management policies over whatever period of time that is considered to be necessary in order to maintain the character and integrity of the assets valued;
- there will be no material change in the existing political, legal, technological, fiscal or economic conditions, which might adversely affect the business of Shangsans Co;
- the operational and contractual terms stipulated in the relevant contracts and agreements will be honored;
- in respect of the copies of the operating licenses and incorporation documents provided, such information are assumed to be reliable and legitimate. Jones Lang LaSalle has relied to a considerable extent on such information provided in arriving at the opinion of value;
- natural weather can have an impact on toll roads, including flooding and other types of inclement weather. It was assumed that no extended closure will occur;
- Jones Lang LaSalle has assumed shareholder loan when necessary in the valuation;
- Jones Lang LaSalle has assumed the accuracy of the financial and operational information such as management accounts, contractual agreements and manufacturing capabilities, provided to Jones Lang LaSalle by Shangsans Co and the Company relied to a considerable extent on such information in arriving at the opinion of value; and

LETTER FROM THE BOARD

- it is assumed that there are no hidden or unexpected conditions associated with the assets valued that might adversely affect the reported value. Further, Jones Lang LaSalle assume no responsibility for changes in market conditions after April 30, 2022.

Deloitte, acting as the reporting accountants of the Company, has performed an assurance engagement in accordance with Hong Kong Standard on Assurance Engagements 3000 (Revised) “Assurance Engagement Other Than Audits or Reviews of Historical Financial Information” issued by the Hong Kong Institute of Certified Public Accountants to obtain reasonable assurance on whether the discounted future estimated cash flows, so far as the calculations are concerned, have been properly compiled in accordance with the bases and assumptions.

Deloitte reported that the discounted future estimated cash flows, so far as the calculations are concerned, have been properly compiled, in all material respects, in accordance with the bases and assumptions. The Directors confirm that the valuation of the entire equity interest of Shangsang Co in the Shangsang Valuation Report, which constitutes a profit forecast under Rule 14.61 of the Listing Rules, has been made after due and careful enquiry.

A letter from Deloitte in compliance with Rule 14.62(2) of the Listing Rules and a letter from the Board in compliance with Rule 14.62(3) of the Listing Rules are included in Appendix IV to this Circular.

As at the Latest Practicable Date, Deloitte does not have any shareholding, directly or indirectly, in any member of the Group or any right (whether legally enforceable or not) to subscribe for or to nominate person to subscribe for securities in any member of the Group. To the best of the Directors’ knowledge, information and belief, Deloitte is an Independent Third Party.

Deloitte has given and has not withdrawn its written consent to the publication of this Circular with inclusion of its report and all references to its name in the form and context in which it is included.

3. INFORMATION ON SHANGSAN CO

Shangsang Co is a company with limited liability established in the PRC. As at the Latest Practicable Date, it is a subsidiary of the Company owned as to approximately 73.63% and is principally engaged in the operation of Shangsang Expressway and interested in approximately 54.79% of the issued share capital of Zheshang Securities.

LETTER FROM THE BOARD

The table below sets out the consolidated financial information of Shangsans Co for the two financial years ended December 31, 2020 and 2021 and the six months ended June 30, 2022 prepared in accordance with generally accepted accounting principles in the PRC:

	Year ended December 31, 2020 <i>RMB'000</i> (Audited)	Year ended December 31, 2021 <i>RMB'000</i> (Audited)	Six months ended June 30, 2022 <i>RMB'000</i> (Unaudited)
Profit before taxation	2,869,121	3,807,312	1,318,770
Profit after taxation	2,144,023	2,863,748	1,010,826

The unaudited consolidated net asset value of Shangsans Co as at June 30, 2022 was approximately RMB30.69 billion.

4. FINANCIAL EFFECT OF THE CAPITAL INCREASE

Upon Completion, the registered capital of Shangsans Co will be increased from approximately RMB5.38 billion up to the maximum amount of RMB7.77 billion. Assuming Communications Group and the Existing Shareholders subscribe for their respective entitled portion in full, Shangsans Co will be owned as to approximately 51.00% by the Company, 22.63% by Communications Group, 18.38% by China Merchants, 5.00% by Tiantai State Capital and 3.00% by Shangyu Transportation. Assuming Communications Group subscribes for all the registered capital to be issued by Shangsans Co, Shangsans Co will be owned as to approximately 51.00% by the Company, 30.73% by Communications Group, 12.73% by China Merchants, 3.46% by Tiantai State Capital and 2.08% by Shangyu Transportation. Following Completion, Shangsans Co will remain a subsidiary of the Company and the financial results of Shangsans Co will continue to be consolidated into the consolidated financial statements of the Group. The Company expects that there will be no gain or loss due to the Capital Increase.

5. INFORMATION OF THE PARTIES TO THE PROPOSED CAPITAL INCREASE AGREEMENT

The Company is a joint stock company established in the PRC on March 1, 1997, the H Shares of which are listed on the Main Board of the Stock Exchange. It is principally engaged in investing in, developing and operating high-grade roads in the PRC. The Group is also engaged in the expressway related development and operation, as well as securities business.

Communications Group is a wholly state-owned enterprise established in the PRC on December 29, 2001 and is principally engaged in a diverse range of businesses, including investment, construction, operation, maintenance, toll collection and ancillary services of transportation infrastructure projects, as well as logistics services and hotel operations.

LETTER FROM THE BOARD

China Merchants is a joint stock company established under the laws of the PRC with limited liability on December 18, 1993, whose shares are listed on the Shenzhen Stock Exchange. It is principally engaged in constructing roads, bridges, ports, waterway infrastructure and other projects, offering transportation infrastructure construction services. It also operates investment management businesses. China Merchants, being a substantial shareholder of Shangsang Co, is a connected person of the Company at subsidiary level.

Shangyu Transportation is a company established in the PRC with limited liability and its business scope includes transportation infrastructure construction, sales of raw and ancillary material, construction of expressways and bridges, provision of transportation information consultation services and development of lands and properties etc..

Tiantai State Capital is a company established in the PRC with limited liability and its business scope includes shareholding interest management, capital operation, improvement of state-owned capital allocation structure, land development, provision of landscaping services, sales of construction material etc..

6. REASONS FOR AND BENEFITS OF ENTERING INTO THE PROPOSED CAPITAL INCREASE AGREEMENT

The Directors consider that the Capital Increase will be beneficial to the Company and Shangsang Co in various ways. First, by having Communications Group, as a strategic investor, participating in the Capital Increase and becoming a shareholder of Shangsang Co, Shangsang Co would be able to take advantage of the resources of Communications Group directly. In particular, Communications Group, which is the largest state-owned transportation infrastructure investment, construction, operation and management enterprise in Zhejiang Province, is expected to provide financial support if Shangsang Co requests additional capital for its business development. Second, pursuant to the Amendment Decision the controlling shareholder of a securities company in the PRC shall have net assets (excluding the securities company) of not less than RMB20 billion in or before 2024. As at December 31, 2021, the consolidated net assets of Shangsang Co excluding Zheshang Securities amounted to approximately RMB7 billion. Shangsang Co, being the controlling shareholder of Zheshang Securities holding approximately 54.79% of its issued share capital, would be able to increase its equity capital through the Capital Increase so as to fulfill such regulatory requirements in the near future.

LETTER FROM THE BOARD

On the other hand, the Directors consider that the Capital Increase represents the capital market's recognition of the value and business performance of Shangsans Co and its subsidiaries. It is an opportunity for Shangsans Co to realize its value by having the subscribers to subscribe for the new registered capital at the appraised value with substantial premium over the registered capital. The Company expects that the Capital Increase will enrich the net assets and cash flow of Shangsans Co to satisfy the regulatory requirements as well as reduce its gearing ratio. In view of the above, the Directors consider that the Capital Increase would help to accelerate the development of Shangsans Co and improve the efficiency of Shangsans Co and the Company.

In considering whether to participate in the Capital Increase, the Directors considered that it would be in the best interests for the Company and its shareholders not to participate in the Capital Increase for the following reasons:

- (i) the proposed subscription amount by the Company for the Capital Increase is substantial which may have a significant impact on the cashflow of the Company. The Company will continue to expand in the transportation infrastructure industry by acquiring more expressways and participating in expressway reconstruction and expansion projects in Zhejiang Province. It is thus important for the Company to maintain sufficient capital in order to satisfy the financial ratio customarily required in expressway acquisition and/or investment projects;
- (ii) while the Company will continue to consolidate the financial information of Shangsans Co into its consolidated financial statements, introducing Communications Group as a shareholder of Shangsans Co presents a valuable opportunity for the Group to obtain extra capital by monetising a minority shareholding in Shangsans Co; and
- (iii) as Communications Group is the controlling shareholder of the Company, it has comprehensive knowledge of the business and operation needs of Shangsans Co and Shangsans Co will be in a better position to leverage the resources of Communications Group as a strategic investor of Shangsans Co.

Based on the above, the Company decided not to participate in the Capital Increase. After the Company decided not to participate in the Capital Increase, Shangsans Co approached several independent third parties to discover their interests in the Capital Increase. However, given (i) the substantial amount of capital contribution required; (ii) the lack of control over Shangsans Co after the acquisition of a minority stake in it; and (iii) the limited marketability of the equity interest of Shangsans Co being a private limited liability company, Shangsans Co failed to receive a positive feedback from those independent third parties.

The proceeds from the Capital Increase of up to RMB13.17 billion will be used for the future acquisitions, working capital and other general corporate purposes for the business development of Shangsans Co and its subsidiaries.

LETTER FROM THE BOARD

The Directors (the opinion of the independent non-executive Directors on the proposed Capital Increase Agreement and the relevant transactions contemplated thereunder by reference to the advice from the independent financial adviser in this regard are set forth on pages 18 to 40 of this Circular) are of the view that the proposed Capital Increase Agreement is (i) on normal commercial terms or better; and (ii) on terms that are fair and reasonable and in the interests of the Company and its Shareholders as a whole. As to the proposed capital contribution by China Merchants and Communications Group Capital Increase under the Capital Increase Agreement, the Directors (including the independent non-executive Directors) are of the view that such proposed contribution is (i) on normal commercial terms or better; and (ii) on terms that are fair and reasonable and in the interests of the Company and its Shareholders as a whole.

As Mr. Yu Zhihong, Mr. Jin Chaoyang, Mr. Fan Ye and Mr. Huang Jianzhang are currently employed by the Communications Group, they have abstained from voting at the board meeting at which the Capital Increase Agreement was considered and approved. Save for Mr. Yu Zhihong, Mr. Jin Chaoyang, Mr. Fan Ye and Mr. Huang Jianzhang, none of the Directors has any material interest in the Capital Increase Agreement or is required to abstain from voting on the relevant Board resolutions to approve the same.

7. LISTING RULES IMPLICATIONS

At at the Latest Practicable Date, China Merchants holds approximately 18.38% of the equity interest of Shangsans Co and thus is a connected person of the Company at the subsidiary level by virtue of being a substantial shareholder of Shangsans Co. As a result, China Merchants' participation in the Capital Increase constitutes a connected transaction of the Company under Chapter 14A of the Listing Rules. By virtue of Rule 14A.101 of the Listing Rules, since (1) China Merchants is a connected person at the subsidiary level, (2) the Board has approved the participation of China Merchants in the proposed Capital Increase; and (3) the independent non-executive Directors have confirmed that the terms of the proposed Capital Increase, including the participation of China Merchants, are fair and reasonable and is on normal commercial terms or better and in the interests of the Company and the Shareholders as a whole, the participation of China Merchants in the proposed Capital Increase is subject to the reporting and announcement requirements, and is exempt from the circular, independent financial advice and independent shareholders' approval requirements under Chapter 14A of the Listing Rules.

As a result of the Capital Increase, the Company's equity interest in Shangsans Co will decrease from approximately 73.63% to 51.00%, which constitutes a deemed disposal of the equity interest in Shangsans Co under Chapter 14 of the Listing Rules.

In addition, as at the Latest Practicable Date, Communications Group holds approximately 67% of the issued share capital of the Company. By virtue of this shareholding interest, Communications Group is a controlling shareholder of the Company.

As one or more of the applicable percentage ratios for the transactions contemplated under the proposed Capital Increase Agreement are over 25% but less than 75%, the Communications Group Capital Increase constitutes a major and connected transaction of the Company under Chapter 14 and Chapter 14A of the Listing Rules, and is subject to the reporting, announcement, circular and independent Shareholders' approval requirements under Chapter 14 and Chapter 14A of the Listing Rules.

LETTER FROM THE BOARD

Communications Group, the Company, Shangsang Co and the Existing Shareholders will not enter into the proposed Capital Increase Agreement before obtaining the approval from the independent Shareholders in respect of the proposed Capital Increase Agreement at the EGM. A separate announcement will be made by the Company in accordance with the Listing Rules when the proposed Capital Increase Agreement is executed upon approval of the independent Shareholders.

8. RECOMMENDATION

The Directors, including the independent non-executive Directors whose views are set out in the “Letter from the Independent Board Committee” in this Circular after considering the advice from the Independent Financial Adviser, are of the view that although the Capital Increase Agreement is not entered into in the ordinary and usual course of business of the Company, the terms thereof and the Capital Increase are on normal commercial terms, fair and reasonable, in the interests of the Company and the Shareholders as a whole.

Accordingly, the Board (including the Independent Board Committee) recommends the Independent Shareholders to vote in favour of the ordinary resolution to be proposed at the EGM to approve the proposed Capital Increase Agreement.

9. EGM

You will find on pages EGM-1 to EGM-3 of this Circular a notice of the EGM to be held at 10 a.m. on October 11, 2022 at 5/F, No. 2 Mingzhu International Business Center, 199 Wuxing Road, Hangzhou City, Zhejiang Province, People’s Republic of China.

A form of proxy for use at the EGM is enclosed. Whether or not you are able to attend the meeting in person, you are requested to complete and return the accompanying form of proxy in accordance with the instructions printed thereon. In case of H Shares, the proxy form shall be lodged with the Company’s H Shares Registrar, Hong Kong Registrars Limited, at 17M Floor, Hopewell Centre, 183 Queen’s Road East, Wanchai, Hong Kong, not less than 24 hours before the time for holding the EGM (or any adjournment thereof). Completion and delivery of the form of proxy will not preclude you from attending and voting in person at the EGM or any adjournment thereof should you so wish.

Pursuant to the Rule 2.15 of the Listing Rules, any shareholder with a material interest in the relevant transaction is required to abstain from voting on the resolution approving such transaction. Accordingly, Communications Group and its associates, who controlled approximately 67% of the voting rights of the Shares as at the Latest Practicable Date, are required to abstain from voting on resolution no.1 at the EGM. Save as disclosed above, no other Shareholders are required to abstain from voting on the resolution at the EGM.

LETTER FROM THE BOARD

10. OTHER INFORMATION

Your attention is also drawn to the letter from the Independent Board Committee, the letter from the Independent Financial Adviser and the additional information set out in the appendices to this Circular and the notice of the EGM.

By order of the board of Directors
Zhejiang Expressway Co., Ltd.
YU Zhihong
Chairman

LETTER FROM THE INDEPENDENT BOARD COMMITTEE



浙江滬杭甬高速公路股份有限公司
ZHEJIANG EXPRESSWAY CO., LTD.

(A joint stock limited company incorporated in the People's Republic of China with limited liability)
(Stock code: 0576)

September 21, 2022

To the Independent Shareholders

Dear Sir or Madam,

**POSSIBLE MAJOR TRANSACTION AND CONNECTED
TRANSACTIONS IN RELATION TO
THE CAPITAL INCREASE AND DEEMED DISPOSAL OF THE EQUITY
INTEREST IN SHANGSAN CO**

We refer to the circular of the Company dated September 21, 2022 to the Shareholders (the “**Circular**”), of which this letter forms part. Terms defined in the Circular shall have the same meanings when used in this letter, unless the context otherwise requires.

We have been appointed by the Board as members of the Independent Board Committee to advise you as to the fairness and reasonableness of the proposed Capital Increase Agreement and whether the transactions contemplated under the proposed Capital Increase Agreement are in the interests of the Company and the Shareholders as a whole. Octal Capital Limited (the “**Independent Financial Adviser**”) has been appointed as the Independent Financial Adviser to advise you and us in this regard. Details of the recommendations from the Independent Financial Adviser are set out in its letter of advice on pages 18 to 40 of the Circular.

Your attention is also drawn to the letter from the Board set out on pages 5 to 16 of the Circular and the additional information set out in the appendices to the Circular.

Having considered the terms of the Capital Increase Agreement, and taken into account the advice from the Independent Financial Adviser proposed and in particular the principal factors and reasons considered by the Independent Financial Adviser as set out in its letter of advice, even though the Capital Increase Agreement is not conducted in the ordinary and usual course of business of the Company, we are of the view that the terms and conditions of the proposed Capital Increase Agreement and the transactions contemplated thereunder are on normal commercial terms and is fair and reasonable and in the interests of the Company and the Shareholders as a whole. Accordingly, we recommend the Independent Shareholders to vote in favor of the relevant resolution set out in the notice of the EGM.

Yours faithfully,

Independent Board Committee

Mr. Pei Ker-Wei
*Independent non-executive
Director*

Ms. Lee Wai Tsang, Rosa
*Independent non-executive
Director*

Mr. Chen Bin
*Independent non-executive
Director*

LETTER FROM THE INDEPENDENT FINANCIAL ADVISER

The following is the letter of advice from Octal Capital Limited to the Independent Board Committee and Independent Shareholders prepared for the purpose of inclusion in this circular.



801-805, 8/F, Nan Fung Tower,
88 Connaught Road Central,
Hong Kong

21 September 2022

To the Independent Board Committee and the Independent Shareholders

Dear Sirs,

POSSIBLE MAJOR TRANSACTION AND CONNECTED TRANSACTION IN RELATION TO THE CAPITAL INCREASE AND DEEMED DISPOSAL OF EQUITY INTEREST IN SHANGSAN CO

INTRODUCTION

We refer to our engagement as the Independent Financial Adviser to advise the Independent Board Committee and the Independent Shareholders in respect of the terms of the proposed Capital Increase Agreement and the transactions contemplated thereunder, particulars of which are set out in the letter from the Board (the “**Letter from the Board**”) of the circular of the Company dated 21 September 2022 (the “**Circular**”), of which this letter forms part. Unless the context requires otherwise, capitalized terms used in this letter shall have the same meanings as those defined under the definitions section of the Circular.

Shangsan Co, a direct non wholly-owned subsidiary of the Company, is considering to raise additional equity capital in the aggregate amount up to approximately RMB13,174 million to cater for future business development needs and satisfy the mandatory regulatory requirements. Under the articles of association of Shangsan Co and the applicable PRC laws, its existing shareholders of Shangsan Co shall have the pre-emptive right in the event of capital increase. The Company, being a controlling shareholder of and with approximately 73.63% of the equity interest in Shangsan Co, was entitled to subscribe its proportionate interest in Shangsan Co. However, the Company proposed not to participate in and intended to waive the pre-emptive right in respect of the Capital Increase.

In light of the above arrangement, Shangsan Co, the Company, the Existing Shareholders and Communications Group proposed to enter into the Capital Increase Agreement to increase the registered capital of Shangsan Co from approximately RMB5,380 million up to the maximum amount of RMB7,767 million, pursuant to which Communications Group and the Existing Shareholders will contribute an aggregate amount up to approximately RMB13,174 million, by way of cash, into the equity capital of Shangsan Co. As a result of the Capital Increase and the waiver of the pre-emptive right by the Company, the Company’s equity interest in Shangsan Co will be decreased from approximately 73.63% to 51.00%.

LETTER FROM THE INDEPENDENT FINANCIAL ADVISER

An Independent Board Committee comprising all independent non-executive Directors, namely Mr. Pei Ker-Wei, Ms. Lee Wai Tsang, Rosa and Mr. Chen Bin, has been established to advise the Independent Shareholders whether the terms of the proposed Capital Increase Agreement are fair and reasonable and whether the proposed Capital Increase Agreement is in the interests of the Company and the Shareholders as a whole.

We, Octal Capital Limited, have been appointed as the independent financial adviser to advise the Independent Board Committee and the Independent Shareholders in this regard. As at the Latest Practicable Date, we were not connected with the directors, chief executive and substantial shareholders of the Company, Communications Group or Shangsans Co. or any of their respective subsidiaries or their respective associates and do not have any shareholding, directly or indirectly, in any member of the Group or any right (whether legally enforceable or not) to subscribe for or to nominate persons to subscribe for securities in any member of the Group and are therefore considered suitable to give independent advice to the Independent Board Committee and the Independent Shareholders in respect of the proposed Capital Increase Agreement. In the last two years, we have been engaged by the Company as the independent financial adviser in respect of a discloseable and connected transaction in relation to the acquisition of 30% interest in Zhejiang HangNing Expressway Co., Ltd. and the entire interest in Zhejiang LongLiLiLong Expressway Co., Ltd. (“**LongLiLiLong Expressways Co.**”) (details of which can be referred to the circular of the Company dated 7 December 2020) and the continuing connected transactions in relation to a new financial services agreement with Zhejiang Communications Investment Group Finance Co., Ltd. (details of which can be referred to the circular of the Company dated 27 May 2022). Under such appointments, we were required to express our opinion on and give recommendations to the independent board committee and the independent shareholders of the Company in respect of the above-mentioned connected transactions. Apart from normal professional fees paid or payable to us in connection with the appointment as the Independent Financial Adviser, no arrangements exist whereby we had received or will receive any fees or benefits from the Company, Communications Group, Shangsans Co and any of their subsidiaries or their respective controlling shareholders that could reasonably be regarded as relevant to our independence. Accordingly, we consider that we are independent to act as the Independent Financial Adviser pursuant to Rule 13.84 of the Listing Rules.

In formulating our opinion, we have relied on the accuracy of the information and representations contained in the Circular and have assumed that all information and representations made or referred to in the Circular as provided by the management of the Company were true at the time they were made and continue to be true as at the date of the Circular. We have also relied on our discussion with the management of the Company regarding the proposed Capital Increase Agreement including the information and representations contained in the Circular. We have also assumed that all statements of belief, opinion and intention made by the management of the Company in the Circular were reasonably made after due enquiry. We consider that we have reviewed sufficient information to reach an informed view, to justify our reliance on the accuracy of the information contained in the Circular and to provide a reasonable basis for our advice. We have no reason to suspect that any material facts have been omitted or withheld from the information contained or opinions expressed in the Circular nor to doubt the truth, accuracy and completeness of the information and representations provided to us by the management of the Company. We have not, however, conducted an independent in-depth investigation into the business and affairs of the Group, Communications Group and Shangsans Co, and any of their respective subsidiaries and their respective associates, nor have we carried out any independent verification of the information supplied to us.

LETTER FROM THE INDEPENDENT FINANCIAL ADVISER

PRINCIPAL FACTORS AND REASONS CONSIDERED

In arriving at our opinions and recommendations in respect of the Capital Increase, we have taken into consideration the following principal factors and reasons:

I. Background of and reasons of the proposed Capital Increase Agreement

1. Information of the Company

The Company is a joint stock company established in the PRC on 1 March 1997, the H Shares of which are listed on the Main Board of the Stock Exchange. It is principally engaged in investment, development, and operating high-grade roads in the PRC. The Group operates nine expressways in which eight of them are located within Zhejiang Province and one expressway is situated within Anhui Province. The Group is also engaged in the expressway related development and operation, as well as securities business.

Expressway	Length (km)	Origin	Destination	Average daily traffic in FY2021 (No. of vehicles)	Average daily traffic in HY2022 (No. of vehicles)
Shanghai-Hangzhou-Ningbo Expressway				73,924	59,227
– Shanghai-Hangzhou Section	102.6	Jiaxing	Hangzhou	71,934	46,395
– Hangzhou-Ningbo Section	145.3	Hangzhou	Ningbo	75,377	68,880
Shangsan Expressway*	141.4	Shaoxing	Taizhou	33,863	26,446
Jinhua Section, Ningbo-Jinhua Expressway	69.7	Jinhua	Jinhua	30,894	26,600
Hanghui Expressway	122.3	Hangzhou	Hangzhou	24,161	22,634
Huihang Expressway	81.6	Huangshan	Huangshan	9,290	9,431
Shenjiahuhang Expressway	92.9	Huzhou	Hangzhou	34,256	26,242
Zhoushan Bay Bridge	46.3	Ningbo	Zhoushan	22,183	16,389
LongLiLiLong Expressways	222.2	Quzhou	Lishui	14,076	13,403
Zhajiasu Expressway	50.3	Jiaxing	Jiaxing	37,910	27,200
Total	1,074.6				

* Owned and operated by Shangsan Co

Source: 2021 Annual Report and 2022 Interim Report

LETTER FROM THE INDEPENDENT FINANCIAL ADVISER

The table below summarizes (i) the major items of the audited financial information of the Group for the two years ended 31 December 2020 and 2021 (“**FY2020**” and “**FY2021**”, respectively) as extracted from the annual report of the Company for FY2021 (the “**2021 Annual Report**”) and (ii) the major items of the unaudited financial information of the Group for the six months ended 30 June 2021 and 2022 (“**HY2021**” and “**HY2022**”, respectively) as extracted from the interim report of the Company for HY2022 (the “**2022 Interim Report**”).

	FY2020 <i>RMB million</i> (audited and restated) <i>(Note)</i>	FY2021 <i>RMB million</i> (audited)	HY2021 <i>RMB million</i> (unaudited)	HY2022 <i>RMB million</i> (unaudited)
Revenue				
– Toll road operation	6,889	9,607	4,660	4,048
– Securities operation	5,087	6,403	2,937	2,913
– Others	476	253	100	67
	<hr/>	<hr/>	<hr/>	<hr/>
Total revenue	12,452	16,263	7,697	7,028
Gross profit	4,413	6,741	3,388	2,812
Profit attributable to shareholders of the Company	2,416	4,762	2,514	1,586

Source: 2021 Annual Report and 2022 Interim Report

Note: The financial information for FY2020 has been restated due to the adoption of Accounting Guideline 5 “Merger Accounting for Common Control” (“AG5”) issued by the Hong Kong Institute of Certified Public Accountants as the Company acquired LongLiLiLong Expressways Co. from Communications Group in January 2021 and the Company and LongLiLiLong Expressways Co. are under common control of Communications Group. Under AG5, the financial information of LongLiLiLong Expressways Co. should be included in the consolidated financial statements of Group as if the acquisition had occurred from the date when LongLiLiLong Expressways Co. has first come under control by Communications Group. Thus, the financial information of the Group for FY2020 has been restated to include the financial information of LongLiLiLong Expressways Co. for FY2020.

LETTER FROM THE INDEPENDENT FINANCIAL ADVISER

The table below summarizes the toll road operation revenue, which derives from the operation of the toll roads for FY2020, FY2021, HY2021 and HY2022:

	Remaining years of operation as at 31 December	2021	FY2020	FY2021	HY2021	HY2022
1 Shanghai-Hangzhou-Ningbo Expressway	6-7	3,217	4,289	2,110	1,810	
2 Shangsang Expressway*	9	960	1,225	606	485	
3 Jinhua Section, Ningbo-Jinhua Expressway	9	381	542	263	232	
4 Hanghui Expressway	8-10	450	641	313	286	
5 Huihang Expressway	12	101	151	79	72	
6 Shenjiahuhang Expressway	12-14	555	778	379	305	
7 Zhoushan Bay Bridge	13	716	934	462	340	
8 LongLiLiLong Expressways	10-11	509	718	362	342	
9 Zhajiasu Expressway	9	N/A	329	86	176	
Total		<u>6,889</u>	<u>9,607</u>	<u>4,660</u>	<u>4,048</u>	

* Owned and operated by Shangsang Co
Source: 2021 Annual Report and 2022 Interim Report

FY2021 vs FY2022

The revenue of the Group increased from approximately RMB12,452 million for FY2020 to approximately RMB16,263 million for FY2021, representing an increase of approximately RMB3,811 million or 30.6%. The increase in revenue was mainly due to (i) the toll-free policy in relation to COVID-19 pandemic imposed by the PRC government during the period from 8 February 2020 to 5 May 2020 reduced the revenue of FY2020; (ii) the traffic volume of the Group's expressways recorded stable growth during FY2021; and (iii) additional revenue contributed by the newly acquired subsidiary, Jiaying Zhajiasu Expressway Co. Ltd. ("**Zhajiasu Expressway Co.**"), in May 2021. The gross profit increased from approximately RMB4,413 million for FY2020 to approximately RMB6,741 million for FY2021, representing an increase of approximately RMB2,328 million or 52.8%. The profit attributable to shareholders of the Company increased from approximately RMB2,416 million for FY2020 to approximately RMB4,762 million for FY2021, representing an increase of approximately RMB2,346 million or 97.1%. Such increment in profitability was mainly due to the significant increase in revenue and gross profit.

LETTER FROM THE INDEPENDENT FINANCIAL ADVISER

HY2021 vs HY2022

The revenue of the Group decreased from approximately RMB7,697 million for HY2021 to approximately RMB7,028 million for HY2022, representing a decrease of approximately RMB669 million or 8.7%. The decrease in revenue was mainly attributable to the outbreak of the epidemic in Zhejiang Province, Shanghai and surrounding provinces and cities in the first half of 2022, in particular, the epidemic outbreak in Shanghai in March 2022, leading to a negative impact on the traffic volume of the Group's expressways. Accordingly, the gross profit reduced from approximately RMB3,388 million for HY2021 to approximately RMB2,812 million for HY2022, representing a reduction of approximately RMB576 million or 17.0%. The profit attributable to shareholders of the Company decreased from approximately RMB2,514 million for HY2021 to approximately RMB1,586 million for HY2022, representing a reduction of approximately RMB928 million or 36.9%. Such decrease in profitability was mainly due to the decrease in toll revenue, as well as the reduction in securities investment gain by approximately RMB437 million.

As set out in the table below, the major items of the consolidated financial statement of the Group as at 31 December 2021 and 30 June 2022 are summarized as below:

RMB million	As at	
	31 December 2021 (audited)	30 June 2022 (unaudited)
Expressway operating rights	26,053	24,734
Property, plant and equipment	5,020	4,807
Other assets	14,380	14,401
Non-current assets	45,453	43,942
Loans to customers arising from margin financing business	19,394	18,019
Financial assets at fair value through profit or loss	45,446	39,433
Bank balances and clearing settlement fund held on behalf of customers	38,393	40,694
Bank balances, clearing settlement fund, deposits and cash		
– restricted bank balances and cash	132	81
– time deposits with original maturity over three months	414	303
– cash and cash equivalents	17,154	23,228
Other assets	9,910	10,972
Current assets	130,843	132,730
Total assets	176,296	176,672

LETTER FROM THE INDEPENDENT FINANCIAL ADVISER

RMB million	As at	
	31 December 2021 (audited)	30 June 2022 (unaudited)
Bank and other borrowings	14,428	16,625
Bonds payable	17,193	18,750
Convertible bonds	1,715	4,652
Other liabilities	837	779
	<hr/>	<hr/>
Non-current liabilities	34,173	40,806
	<hr/>	<hr/>
Account payable to customers arising from securities business	38,069	40,323
Bank and other borrowings	2,316	3,468
Short-term financing note payable	7,941	1,983
Bonds payable	10,456	8,419
Financial assets sold under repurchase agreements	25,250	19,634
Other liabilities	13,668	16,159
	<hr/>	<hr/>
Current liabilities	97,700	89,986
	<hr/>	<hr/>
Total liabilities	131,873	130,792
	<hr/>	<hr/>
Net current assets	33,143	42,744
	<hr/>	<hr/>
Net assets	44,423	45,880
	<hr/> <hr/>	<hr/> <hr/>

Source: 2021 Annual Report and 2022 Interim Report

FY2021

As at 31 December 2021, the Group's total assets amounted to approximately RMB176,296 million in which the expressway operation rights (solely related to the toll road operation segment) amounted to approximately RMB26,053 million, representing approximately 14.8% of the total assets of the Group. The Group had cash and cash equivalents of approximately RMB17,154 million as at 31 December 2021, representing approximately 9.7% of the total assets of the Group. Furthermore, the main assets in relation to the securities operation as at 31 December 2021 included loans to customers arising from margin financing business and bank balances and clearing settlement fund held on behalf of customers, which in aggregate amounted to approximately RMB57,787 million, representing approximately 32.8% of the total assets of the Group.

LETTER FROM THE INDEPENDENT FINANCIAL ADVISER

As at 31 December 2021, the Group's liabilities mainly include account payable to customers arising from securities business amounted to approximately RMB38,069 million, representing approximately 28.9% of the total liabilities of the Group. The total borrowings of the Group included bank and other borrowings, bonds payable, convertible bonds and short-term financing note payable, which in aggregate amounted to approximately RMB54,049 million, representing approximately 41.0% of the total liabilities of the Group.

HY2022

As at 30 June 2022, the Group's total assets amounted to approximately RMB176,672 million in which the expressway operation rights (solely related to the toll road operation segment) amounted to approximately RMB24,734 million, representing approximately 14.0% of the total assets of the Group. The Group had cash and cash equivalents of approximately RMB23,228 million as at 30 June 2022, representing approximately 13.1% of the total assets of the Group. Furthermore, the main assets in relation to the securities operation as at 30 June 2022 included loans to customers arising from margin financing business and bank balances and clearing settlement fund held on behalf of customers, which in aggregate amounted to approximately RMB58,712 million, representing approximately 33.2% of the total assets of the Group. The total asset of the Group slightly increased by approximately 0.2% as compared to that as at 31 December 2021.

As at 30 June 2022, the Group's liabilities mainly include account payable to customers arising from securities business amounted to approximately RMB40,323 million, representing approximately 30.8% of total liabilities of the Group. The total borrowings of the Group included bank and other borrowings, bonds payable, convertible bonds and short-term financing note payable, which in aggregate amounted to approximately RMB53,897 million, representing approximately 41.2% of the total liabilities of the Group. The total liabilities of the Group slightly decreased by approximately 0.8% as compared to that as at 31 December 2021.

2. *Information of Communications Group*

Communications Group is a wholly state-owned enterprise established in the PRC on 29 December 2001 and the controlling shareholder of the Company. It is principally engaged in a diverse range of businesses, including investment, construction, operation, maintenance, toll collection and ancillary services of transportation infrastructure projects, as well as logistics services and hotel operations.

3. *Information of Shangsang Co*

Shangsang Co is a company with limited liability established in the PRC. As at the Latest Practicable Date, it is a subsidiary of the Company owned as to approximately 73.63% and is principally engaged in the operation of Shangsang Expressway and securities operation which is operated by Zheshang Securities. Shangsang Co is interested in approximately 54.79% of the issued share capital of Zheshang Securities.

Zheshang Securities is a company established in the PRC with its shares listed in Shanghai Stock Exchange (SH.601878). Zheshang Securities is principally engaged in provision of asset management services, securities and future brokerage services and investment banking services.

LETTER FROM THE INDEPENDENT FINANCIAL ADVISER

The table below summarizes the major consolidated financial information of Shangsans Co and its subsidiaries (including Zheshang Securities) (“**Shangsans Group**”) for FY2020 and FY2021 extracted from the auditor’s report prepared in accordance with the generally accepted accounting principles in the PRC for FY2021 (“**Shangsans Auditor’s Report**”) and the financial information for HY2021 and HY2022 extracted from the unaudited consolidated management account of Shangsans Group for HY2022 (“**Shangsans Management Account**”):

RMB million	FY2020 <i>(audited)</i>	FY2021 <i>(audited)</i>	HY2021 <i>(unaudited)</i>	HY2022 <i>(unaudited)</i>
Revenue				
– Securities operation	10,448	16,252	7,071	7,897
– Toll road operation	963	1,229	607	486
– Other	19	15	–	–
	<hr/>	<hr/>	<hr/>	<hr/>
Total revenue	11,430	17,496	7,678	8,383
Gross profit	2,854	3,572	3,428	3,254
Profit attributable to its shareholders	1,524	1,888	852	674

Source: Shangsans Auditor’s Report and Shangsans Management Account

FY2021 compared to FY2020

The revenue of Shangsans Group is mainly generated from the securities operation, amounted to approximately RMB16,252 million for FY2021, representing approximately 92.9% of the total revenue of Shangsans Group. The revenue from securities operation increased from approximately RMB10,448 million for FY2020 to approximately RMB16,252 million for FY2021, representing an increase of approximately 55.6%. The increase in revenue from securities operation was mainly due to the increase in sale of future products and commission income.

During FY2021, the revenue from toll road operation was approximately RMB1,229 million, representing approximately 7.0% of the total revenue of Shangsans Group. The revenue from toll road operation increased by approximately RMB266 million from approximately RMB963 million for FY2020 to approximately RMB1,229 million for FY2021. The toll-free policy imposed by the PRC government during the period from 8 February 2020 to 5 May 2020 reduced the revenue of FY2020. The operation of Shangsans Expressway resumed to a normal level in FY2021.

The gross profit increased from approximately RMB2,854 million for FY2020 to approximately RMB3,572 million for FY2021, representing an increase of approximately 25.2%. Shangsans Group recorded an increase in profit attributable to its shareholders from approximately RMB1,524 million for FY2020 to approximately RMB1,888 million for FY2021, representing an increase of approximately 23.9%. This is mainly due to the increase in the revenue as discussed above.

LETTER FROM THE INDEPENDENT FINANCIAL ADVISER

HY2022 compared to HY2021

The total revenue of Shangsang Group increased by approximately 9.2% from approximately RMB7,678 million for HY2021 to approximately RMB8,383 million for HY2022. The revenue from securities operation remained as the largest portion of total revenue of Shangsang Group which accounted for approximately 94.2% total revenue of Shangsang Group for HY2022. The increase in total revenue was mainly attributable to the revenue growth of the securities operation.

The gross profit decreased from approximately RMB3,428 million for HY2021 to approximately RMB3,254 million for HY2022, representing a reduction of approximately 5.1%. Shangsang Group recorded a decrease in the profit attributable to its shareholders from approximately RMB852 million for HY2021 to approximately RMB674 million for HY2022, representing a decrease of approximately 20.9%. This is mainly due to the decrease in investment income and the loss on fair value change.

The table below summarizes the consolidated financial position of Shangsang Group as at 31 December 2021 and 30 June 2022 extracted from Shangsang Auditor's Report and Shangsang Management Account, respectively:

	As at 31 December 2021 RMB million (audited)	As at 30 June 2022 RMB million (unaudited)
Intangible assets	1,445	1,355
Property, plant and equipment	1,143	1,085
Right of use assets	465	438
Other assets	820	914
Non-current assets	3,873	3,792
Loans to customers arising from margin financing business	19,394	18,019
Financial assets	45,809	39,694
Trade receivable	1,488	1,365
Financial assets held under resale agreements	7,088	6,954
Bank balances and clearing settlement fund held on behalf of customers	32,733	40,693
Bank balances and cash (excluding bank balances and clearing settlement fund held on behalf of customers)	9,982	8,111
Other assets	10,276	11,950
Current assets	126,770	126,786
Total assets	130,643	130,578

LETTER FROM THE INDEPENDENT FINANCIAL ADVISER

	As at 31 December 2021 RMB million <i>(audited)</i>	As at 30 June 2022 RMB million <i>(unaudited)</i>
Bonds payable	11,400	14,447
Other liabilities	643	3,305
	<hr/>	<hr/>
Non-current liabilities	12,043	17,752
	<hr/>	<hr/>
Financial liabilities	2,925	2,918
Agency fee for securities trading	20,014	23,655
Bank and other borrowings	72	711
Short-term financing note payable	7,941	1,983
Bonds payable	7,231	6,664
Financial assets sold under repurchase agreements	25,250	19,634
Deposits paid and other liabilities	26,258	26,570
	<hr/>	<hr/>
Current liabilities	89,691	82,135
	<hr/>	<hr/>
Total liabilities	101,734	99,887
	<hr/>	<hr/>
Net current assets	37,079	44,651
	<hr/>	<hr/>
Net assets	28,909	30,691
	<hr/> <hr/>	<hr/> <hr/>

Source: Shangsang Audit Report and Shangsang Management Account

The total assets of Shangsang Group mainly comprise of assets for securities operation. According to the annual report of Zheshang Securities for FY2021, the total assets of Zheshang Securities amounted to approximately RMB125,251 million, representing approximately 95.9% of the total assets of Shangsang Group as at 31 December 2021. The bank balances and cash of Shangsang Group was approximately RMB9,982 million as at 31 December 2021.

LETTER FROM THE INDEPENDENT FINANCIAL ADVISER

The total liabilities of Shangsang Group was approximately RMB101,734 million as at 31 December 2021, among of which approximately RMB101,414 million belong to Zheshang Securities, representing approximately 99.7% of the total liabilities of Shangsang Group. Total borrowings of Shangsang Group as at 31 December 2021 included bank and other borrowings, bonds payable and short-term financing note payable, which in aggregate amounted to approximately RMB26,644 million, representing approximately 26.2% of the total liabilities of Shangsang Group.

The net assets of Shangsang Group was approximately RMB28,909 million as at 31 December 2021, while the net assets of Shangsang Co was approximately RMB7,014 million as at 31 December 2021. The gearing ratio (defined as total borrowings divided by total assets less bank balances and clearing settlement fund held on behalf of customers) of Shangsang Group as at 31 December 2021 was approximately 27.2%.

The net assets of Shangsang Group increased from approximately RMB28,909 million as at 31 December 2021 to approximately RMB30,691 million as at 30 June 2022, representing an increase of approximately 6.2%.

4. Reasons for and benefits of entering into the proposed Capital Increase Agreement

Pursuant to the Amendment Decision, it stipulated that the controlling shareholder of a company, which is engaged in securities business in the PRC, shall have net assets (excluding the securities company) of not less than RMB20,000 million on or before 2024 (the “**Net Assets Requirement**”). Shangsang Co, being the controlling shareholder of Zheshang Securities with approximately 54.79% of its equity interests, is subject to the Net Assets Requirement. According to the unaudited management account of Shangsang Co for the six months ended 30 June 2022, the net assets was approximately RMB6,880 million as at 30 June 2022. The net profit after tax of Shangsang Co for FY2021 and FY2020 was approximately RMB933 million and RMB664 million, respectively. The net profit after tax of Shangsang Co for HY2022 is approximately RMB246 million. In view of the current financial position and the timing for the adoption of the Net Assets Requirement, the Directors consider that it is not feasible for Shangsang Co to increase its net assets to RMB20,000 million through its existing ordinary operation. On the other hand, debt financing is not feasible for the purpose to fulfill the Net Assets Requirement because debt financing will increase the total liabilities of Shangsang Co. Therefore, it is necessary for Shangsang Co to raise new capital through equity financing to fulfill the Net Assets Requirement. Based on the net assets of Shangsang Co as at 30 June 2022, Shangsang Co must raise at least RMB13,120 million to fulfill the Net Assets Requirement.

With reference to the Letter from the Board, the business plan of the Group continues to focus on and further allocate resources in the transportation infrastructure industry, including acquiring more expressways and participating in expressway reconstruction and expansion projects in Zhejiang Province in the future. According to “The Fourteenth Five-Year Plan for Comprehensive Transportation Development in Zhejiang Province” published by the government of Zhejiang Province on 17 June 2021, Jinhua Section of Ningbo-Jinhua Expressway and Zhajiasu Expressway, which are operated by the Group, have been included in the reconstruction and expansion projects in Zhejiang Province. The management of the Company is considering to participate in bidding of the reconstruction and expansion project of Jinhua Section of Ningbo-Jinhua Expressway and the reconstruction and expansion project of Zhajiasu Expressway.

LETTER FROM THE INDEPENDENT FINANCIAL ADVISER

Meanwhile, the Group constantly expanded the scale of its core toll road business by proactively pursuing investment and merger and acquisition projects in the PRC and the overseas markets. The Group, during the past two years, acquired the equity interests in HangNing Expressway, LongLiLiLong Expressways and Zhajiasu Expressway with total consideration of approximately RMB3,695 million and settled by its internal resources. As such, the Group intends to retain cash internally for potential acquisition of expressway-related projects.

Based on the Group's internal cash flow forecast, the Company is required to conduct debt/equity financing to raise sufficient funding for the said capital injection to Shangsang Co. However, the Group's gearing ratio (defined as total liabilities less balance of accounts payable to customers arising from securities business to the total equity) was 211.2% as at 31 December 2021 and the finance cost of the Group for FY2021 accounted for approximate 28.8% of the Group's gross profit. During HY2022, the gearing ratio of the Group was 197.2% and the finance cost of the Group was approximately RMB905 million, which accounted for approximately 32.2% of the Group's gross profit. If the Company obtains new borrowings, the finance cost burden of the Group will be further increased.

Since the Company still maintains its control in Shangsang Co as its non wholly-owned subsidiary after Completion, the Company can continue to benefit from the growth in the Shangsang Co's business and enjoys its investment return.

Having considered that (i) the Group's core development strategy is its toll road operation; (ii) the additional finance cost burden on the Group, as debt financing is required for capital injection pursuant to the Capital Increase; and (iii) the Company could maintain its controlling shareholder position in Shangsang Co even without making any capital injection to Shangsang Co pursuant to the Capital Increase, we concur with the Directors that the rationale behind the grant of waiver of the pre-emptive right pursuant to the Capital Increase is fair and reasonable to the Company and the Shareholders as a whole.

LETTER FROM THE INDEPENDENT FINANCIAL ADVISER

II. The proposed Capital Increase Agreement

The major terms of the proposed Capital Increase Agreement are summarized as below:

Parties: (i) Shangsans Co
(ii) the Company
(iii) the Existing Shareholders and
(iv) Communications Group

Capital Increase: The registered capital of Shangsans Co will be increased from approximately RMB5,380 million up to the maximum amount of RMB7,767 million.

Assuming the Existing Shareholders shall participate in the Capital Increase, Communications Group, China Merchants, Tiantai State Capital and Shangyu Transportation shall subscribe for up to approximately RMB1,757 million, RMB439 million, RMB119 million and RMB72 million of new registered capital of Shangsans Co, respectively, at a consideration of RMB9,699 million, RMB2,421 million, RMB659 million and RMB395 million, respectively. In case, there is any unsubscribed amount of new registered capital by the Existing Shareholders (if any), Communications Group will subscribe for such unsubscribed amount of new registered capital.

Basis of consideration: The aggregate amount of Capital Increase to be made by Communications Group and the Existing Shareholders of up to RMB13,174 million was determined after arm's length negotiations amongst the parties with reference to (i) the additional capital required to be raised to satisfy the Net Assets Requirement; (ii) the Shangsans Valuation Report prepared by Jones Lang LaSalle (the "HK Valuer") and the Shangsans PRC Valuation Report prepared by Tianyuan Asset Valuation Co., Ltd* (天源資產評估有限公司) according to the requirements of Zhejiang SASAC and relevant PRC laws and regulations; (iii) due to the adoption of toll-free policy for all vehicles during the containment of COVID-19 in 2020, it is expected that there will be additional toll collection rights period to be added on top of the original toll collection rights period of Shangsans Expressway (i.e. from 26 December 2000 to 25 December 2030) even though the exact length of the period is not certain and it was agreed between the parties that an additional appraised value is suggested to be added based on the additional toll collection rights period of 79 days; (iv) the dividend to be paid out by Shangsans Co to the Company and the Existing Shareholders (which has been paid out in September 2022); and (v) the future capital needs of Shangsans Co.

Pursuant to the Shangsans Valuation Report prepared by the HK Valuer, the appraised value of the entire equity interest of Shangsans Co as at 30 April 2022 was approximately RMB26,880 million (after deducting the aforementioned dividend payable).

LETTER FROM THE INDEPENDENT FINANCIAL ADVISER

Completion of the proposed Capital Increase Agreement: Completion of the proposed Capital Increase Agreement is conditional upon Shangsans Co having completed the filing in respect of the changes in shareholding structure, directors, supervisors, senior management (if applicable), articles of association, etc. and obtained the notification for approval for changes and the new business license within the specified period after the effective day of the proposed Capital Increase Agreement. Although Completion is not conditional upon the actual contribution of Communications Group for its subscribed amount, Communications Group will only be entitled to appoint director to Shangsans Co and receive dividend after the full payment of the subscribed amount under the Capital Increase.

Payment of the Capital Increase: Subject to the proposed Capital Increase Agreement becoming effective, the payments of the Capital Increase by Communications Group and the Existing Shareholders are expected to be made simultaneously on or before 31 December 2024, by way of bank remittance.

The payment period of the Capital Increase was determined with reference to the deadline for Shangsans Co to meet the Net Assets Requirement under the Amendment Decision.

Nomination of directors and supervisors: Shangsans Co's board of directors shall consist of nine directors, whilst five of them shall be appointed by the Company, one shall be appointed by Communications Group, two shall be appointed by China Merchants and one shall be appointed by Tiantai State Capital. The chairman of the board of directors shall be elected by the board of directors of Shangsans Co.

Shangsans Co's board of supervisors shall consist of five supervisors, of which three shall be representatives of the shareholders and two shall be representatives of the employees.

Communications Group, the Company, Shangsans Co and the Existing Shareholders will not enter into the proposed Capital Increase Agreement before obtaining the approval from the independent Shareholders in respect of the proposed Capital Increase Agreement at the EGM.

For further details of the terms of proposed Capital Increase Agreement, please refer to the Letter from the Board.

We noted that the board of directors of Shangsans Co (the "**Shangsans Board**") consist of nine directors. Before Completion, the Company, China Merchants and Tiantai State Capital have appointed six directors, two directors and one director, respectively to Shangsans Co. After Completion and full payment of the subscribed amount under the Capital Increase from Communications Group, Communications Group will be entitled to appoint one director to Shangsans Co while the number of directors of Shangsans Co to be appointed by the Company will be reduced to five.

LETTER FROM THE INDEPENDENT FINANCIAL ADVISER

As advised by the management of the Company, the board composition arrangement has taken into account of various factors, including the shareholding of each shareholder in the enlarged registered capital of Shangsans Co and the current appointment rights held by the existing shareholders. In view of (i) the composition of the Shangsans Board will only change after Communications Group has fulfilled its capital contribution obligation under the Capital Increase; (ii) the directors to be appointed by the Company remains as the majority in the Shangsans Board; (iii) upon Completion, the Company will own 51% of Shangsans Co's equity interest and maintain its control in Shangsans Co; and (iv) the financial results of Shangsans Co will continue to be consolidated into the consolidated financial statements of the Group, we considered that the board composition arrangement under the proposed Capital Increase Agreement is fair and reasonable and in the interest of the Company and the Independent Shareholders as a whole.

Pursuant to the proposed Capital Increase Agreement, prior to the full payment of the subscribed amount under the Capital Increase from Communication Group, (i) Communication Group cannot appoint any director to the Shangsans Board; and (ii) no dividend will be paid to Communication Group. This mechanism restricts Communications Group's participation in the management of Shangsans Co and collection of dividend return from Shangsans Co before its full payment of the subscribed amount under the Capital Increase. We are of the view that the arrangement of director appointment and dividend distribution in relation to Communications Group are fair and reasonable and in the interest of the Company.

Assuming Communications Group subscribes for the new registered capital which the Company was originally entitled to subscribe and the Existing Shareholders subscribe for their respective entitled portion in full, Shangsans Co will be owned as to approximately 51.00% by the Company, 22.63% by Communications Group, 18.38% by China Merchants, 5.00% by Tiantai State Capital and 3.00% by Shangyu Transportation. Assuming Communications Group subscribes for all the new registered capital which the Company and the Existing Shareholders were originally entitled to subscribe, Shangsans Co will be owned as to approximately 51.00% by the Company, 30.73% by Communications Group, 12.73% by China Merchants, 3.46% by Tiantai State Capital and 2.08% by Shangyu Transportation. Either of the scenario above, Shangsans Co will remain as a non wholly-owned subsidiary of the Company upon Completion and the financial results of Shangsans Co will continue to be consolidated into the consolidated financial statements of the Group. Furthermore, the fair value of the equity interest of Shangsans Co (after deducting the dividend payable (which has been paid out in September 2022)) held by the Company as at 30 April 2022 was approximately RMB19,792 million (i.e. RMB26,880 million \times 73.63%). After the injection of the Capital Increase, the fair value of the equity interest of Shangsans Co held by the Company will be slightly increased to approximately RMB20,428 million (i.e. (RMB26,880 million + RMB13,174 million) \times 51%). Thus, we consider that the dilution effect of the Capital Increase to the Company is justifiable.

III. Basis of the consideration of the Capital Increase

According to the Letter from the Board, the determination basis of the consideration was based on the appraised value of the entire equity interest of Shangsans Co (the "Shangsans Equity") prepared by the HK Valuer after deducting the dividend payable (which has been paid out in September 2022).

LETTER FROM THE INDEPENDENT FINANCIAL ADVISER

1. Shangsang Valuation Report

Shangsang Co has two operating segments, namely toll road operation and securities operation through Zheshang Securities which is listed on the Shanghai Stock Exchange. According to the Shangsang Valuation Report, the appraised value of the Shangsang Equity as at 30 April 2022 (the “**Valuation Benchmark Date**”) was derived from four components and summarised as follow:

	RMB’ million
Appraised value of toll road operation	5,400
Appraised value of securities operation	19,570
Add: Cash at as Valuation Benchmark Date	2,349
Less: Other liabilities at as Valuation Benchmark Date	<u>(59)</u>
Appraised value of Shangsang Equity	<u>27,260</u>
Less: Dividend payable (which has been paid out in September 2022)	<u>(380)</u>
Appraised value of Shangsang Equity (after deducting aforementioned dividend payable)	<u>26,880</u>

a. Competence of the HK Valuer

In order to assess the expertise and independence of the HK Valuer, we have (i) reviewed the engagement letter between the HK Valuer and the Company; (ii) conducted a phone interview with the core team member of the HK Valuer to understand their experience and relationship with the Company and the valuation methodology; and (iii) discussed with the HK Valuer about their previous experiences on valuation projects.

Based on our discussion with the HK Valuer, we understand that the Shangsang Valuation Report is prepared by Mr. Simon M.K. Chan, who is the executive director of the HK Valuer. Mr. Simon M.K. Chan is a certified public accountant, a senior member of Hong Kong Institute of Certified Public Accountants and a professional member of Royal Institution of Chartered Surveyors with extensive experience in business valuation in the PRC. The other team members of the HK Valuer also have relevant education background and working experience in valuation projects in Hong Kong and the PRC. The HK Valuer has confirmed that it is an independent third party of the Group, Communication Group, the Existing Shareholders and Shangsang Co, and their connected persons; and the scope of work of the engagement is appropriate and suitable for the preparation of the Shangsang Valuation Report. As such, we are not aware of any matters that could cause us to have doubts on the expertise and independence of the HK Valuer. Based on the above, we considered that the scope of work of the HK Valuer is appropriate.

LETTER FROM THE INDEPENDENT FINANCIAL ADVISER

b. Methodologies and assumptions

To derive the appraisal value of Shangsans Equity, the HK Valuer adopted income approach for toll road operation and market approach for securities operation.

- Appraised value of toll road operation

We understood that the HK Valuer has considered three generally adopted valuation approaches, which are income approach, market approach and cost approach (asset-based approach) in performing the valuation of toll road operation of Shangsans Co.

The income approach is commonly adopted in the business valuation for valuation subject with supportable operating profit and cash flow forecast such as toll road operation. Based on our discussion with the HK Valuer that the valuation of toll road operation is derived from the discounted cash flow forecast for the period between May 2022 and December 2030, which is the expiry date of the toll concession right. The discounted cash flow forecast has been reviewed and confirmed by the Directors and Deloitte. The comfort letter on profit forecast of Shangsans Co issued by Deloitte is set out in Appendix IV of this Circular. Given that (i) the profit forecast of Shangsans Co is made reference with the audited financial result for FY2021; (ii) the discounted cash flow forecast could be reasonably estimated by the Directors and has been reviewed by Deloitte; and (iii) the toll revenue is supported by the traffic study report (the “**Traffic Study Report**”) prepared by WB Group (the “**Traffic Study Expert**”) as set out in Appendix III of this Circular, the HK Valuer considers that income approach is the appropriate methodology for the valuation of toll road operation of Shangsans Co. We also discussed with the HK Valuer about the market approach and the cost approach in valuation of toll road operation of Shangsans Co. The HK Valuer advised that there are limited appropriate market transactions which are either similar or comparable to Shangsans Expressway and each of these comparable transactions has their own location characteristics, traffic characteristics, concession terms, operating environment, cost structure and ongoing maintenance schedule. The cost approach, which is a method of replacing the historical costs of the assets and liabilities shown in the statements of the financial position of Shangsans Co, primarily involves the assessment of assets and liabilities to appraise the business value of the valuation subject. However, the cost approach does not take into consideration of traffic demand, traffic volume, toll revenue and future development of expressway. Having considered the limitations of market approach and cost approach, the HK Valuer is of the view that the market approach and cost approach may not result in a fair estimate of the business value of toll road operation of Shangsans Co and therefore the HK Valuer has applied the income approach in the valuation of toll road operation of Shangsans Co. We concur with the HK Valuer that income approach is appropriate for the valuation of toll road operation of Shangsans Co.

We have reviewed and discussed with the HK Valuer in respect of the assumptions applied in the valuation. Details of the valuation assumptions are set out in Appendix II of this Circular.

LETTER FROM THE INDEPENDENT FINANCIAL ADVISER

Based on our discussion with the HK Valuer and our review of the profit and cash flow forecast of Shangsang Expressway for the period between May 2022 and December 2030, we understand that (i) the projected annual revenue of Shangsang Expressway is directly derived from the annual toll revenue estimated by the Traffic Study Expert (excluding value-added tax); (ii) the projected operating cost of Shangsang Expressway is primarily based on the historical costs and the current accounting policies of Shangsang Co; (iii) the projected capital expenditure for Shangsang Expressway is based on the historical cost and future maintenance and renovation estimated by the management of Shangsang Co; and (iv) the projected working capital is mainly made reference to the historical working capital for maintaining the operation of Shangsang Expressway. Regarding the above assumptions used in the profit and cash flow forecast, we (i) have cross-checked and compared the forecasted toll revenue (excluding value-added tax) used in the valuation and the Traffic Study Report and no variance is noted; (ii) compared the projected operating cost against the historical operating cost for the year ended 31 December 2021 and noted that the growth of projected figures are mainly driven by the growth in toll revenue or made reference to the historical growth rate of respective items; (iii) reviewed the estimation basis of the capital expenditure; and (iv) discussed with the management of the Company for the future development of Shangsang Expressway and the relevant financial impact to the profit and working capital forecast.

The discount rate of 10.01% for the valuation of toll road operation of Shangsang Co is derived by the HK Valuer through the Capital Asset Pricing Model (“**the CAPM Model**”), by utilizing risk-free rate of return in the USA, market risk premium, country risk premium and liquidity risk premium. In arriving at the beta being adopted in the CAPM Model, the HK Valuer adopted eight companies which are primarily engaged in toll road operation in the PRC and listed on the Stock Exchange. We have further reviewed the background of these comparable companies and noted that the core businesses of these comparable companies are toll road operation; and 50% or more of revenue is derived from toll road operation in the PRC, we are of the view that these comparable companies are fair and representative samples.

The HK Valuer also advised that the general assumptions used in the valuation of Shangsang Expressway including but not limited to no material change in the existing political, economic, social, legal, tax conditions where the business is currently in operation are common assumptions adopted in various business valuation projects.

With reference to the comfort letter included in Appendix IV in this Circular, we understand that Deloitte has checked the arithmetical accuracy of the calculations of the discounted cash flow forecast and concluded that the discounted cash flow forecast has been properly compiled in all material respects in accordance with the bases and assumptions adopted by the Directors, who are solely responsible for the discounted cash flow forecast.

LETTER FROM THE INDEPENDENT FINANCIAL ADVISER

- Appraised value of securities operation

The appraisal value of the 54.79% equity interest held by Shangsang Co in Zheshang Securities is derived from the market capitalization of Zheshang Securities as at the Valuation Benchmark Date times 54.79% amounted to approximately RMB19,570 million, representing approximately 71.8% of the appraised value of the Shangsang Equity. The market capitalization of Zheshang Securities is derived from the closing price of its share (i.e. RMB9.21 per share) times the number of issued shares of Zheshang Securities at the Valuation Benchmark Date (i.e. 3,878,168,795 shares). We have checked the closing price of Zheshang Securities and the number of issued shares of Zheshang Securities as at Valuation Benchmark Date and no variance is noted. We concur with the HK Valuer that market capitalisation is the common approach to derive the fair value of a public-trading company.

- Cash and other liabilities

Cash of Shangsang Co as at Valuation Benchmark Date was added to the appraised value of Shangsang Equity. We have checked to the unaudited management account of Shangsang Co for the four months ended 30 April 2022 and no variance is noted.

Other liabilities included receipts in advance, deferred revenue and deferred tax liability were deducted from the appraised value of Shangsang Equity. We have checked to the unaudited management account of Shangsang Co for the four months ended 30 April 2022 and no variance is noted.

Taking into account (i) the HK Valuer is independent from the Company and has relevant experience in conducting the valuation similar to that of Shangsang Co; (ii) the reasonableness of the bases and assumptions adopted in the valuation of Shangsang Expressway; (iii) the key assumptions adopted in the discounted cash flow forecast from May 2022 to December 2030 of Shangsang Expressway are fair and reasonable; (iv) the discounted cash flow forecast of Shangsang Co has been reviewed by Deloitte; (v) the market capitalization of Zheshang Securities is fairly calculated; (vi) the cash and other liabilities as at Valuation Benchmark Date are fairly stated; and (vii) the Directors have discussed and reviewed the assumptions adopted in the Shangsang Valuation Report, we consider that the valuation methodologies behind the Shangsang Valuation Report are fair and reasonable.

2. Traffic Study Report

a. Competence of the Traffic Study Expert

In order to assess the expertise and independence of the Traffic Study Expert, we have (i) reviewed the engagement letter between the Traffic Study Expert and the Company for the engagement of the traffic study of Shangsang Expressway; (ii) conducted a phone interview with the core team members of the Traffic Study Expert to understand its experience and its relationship with the Company and the projection methodology of the Traffic Study Report; and (iii) discussed with the Traffic Study Expert about its previous experiences on traffic consulting projects.

LETTER FROM THE INDEPENDENT FINANCIAL ADVISER

We understand that (a) Traffic Study Expert is an experienced consultant in the traffic study for the PRC's infrastructure and has been participated in acquisition of expressway projects of Hong Kong-listed companies; (b) the Traffic Study Expert has confirmed that it is an independent third party of the Group, Communication Group, the Existing Shareholders and Shangsans Co, and their connected persons; and (c) the scope of work of this engagement is appropriate and suitable for the preparation of the Traffic Study Report. As such, we are not aware of any matters that could cause us to have doubts on the expertise and independence of the Traffic Study Expert.

b. Methodologies and assumptions

We have reviewed and discussed with the Traffic Study Expert about Traffic Study Report on the bases, assumptions and methodologies adopted to estimate the traffic volume and toll revenue of Shangsans Expressway for the period from May 2022 to March 2031. We note that the Traffic Study Expert has (i) collected economic data of Zhejiang Province and researched the future development plan in Zhejiang Province; (ii) obtained historical traffic data (for example, traffic volume, types of vehicles, toll revenue) of Shangsans Expressway; (iii) analyzed the data in (i) and (ii) above; and (iv) built a traffic model to estimate the traffic volume and toll revenue of Shangsans Expressway.

In estimating the traffic volume and toll revenue of Shangsans Expressway, we note that the Traffic Study Expert has considered (i) the existing travel patterns; (ii) the historical traffic data for the period from 2017 to 2021 for Shangsans Expressway; (iii) the toll of each type of vehicle is based on the official toll issued by the Zhejiang Government on 30 December 2019; (iv) the toll discount for ETC user and toll-free policy in four public holidays will continue to be effective; and (v) the future development of the surrounding transportation network. In addition, we understand from the Traffic Study Expert that they have also considered the potential competition factors and government toll policies in the traffic projection of Shangsans Expressway. As stated in the Traffic Study Report, the Traffic Study Expert adopted the generalized cost approach in determining users' route choice behaviors, which are affected by travel time, travel distance and costs.

On this basis, nothing has come to our attention that will cause us to doubt the reasonableness of the Traffic Study Report prepared by the Traffic Study Expert. The Traffic Study Expert has advised that the underlying assumptions and the forecast procedures adopted in the Traffic Study Report are commonly used in its previous relevant traffic projects in the PRC.

Based on our phone interview with the core member of Traffic Study Expert and our review of Traffic Study Report, we have not identified any major issues that would cause us to doubt the fairness and reasonableness of the bases, assumptions, and methodologies applied in the Traffic Study Report. As such, we are of the opinion that the Traffic Study Report provide a fair and reasonable basis for the preparation of the Shangsans Valuation Report.

LETTER FROM THE INDEPENDENT FINANCIAL ADVISER

3. *The dividend payable*

According to the shareholder meeting of Shangsans Co held on 31 May 2022, Shangsans Co will distribute approximately RMB380 million to its shareholders as dividend which will be payable in 2022. As advised by the management of the Company, all parties in the proposed Capital Increase Agreement agreed to deduct the dividend payable in determining the consideration of the Capital Increase. The dividend has been paid to the Company and the Existing Shareholders in September 2022.

Having considered that (i) the methodologies and assumptions in the Shangsans Valuation Report is appropriate; (ii) the bases, assumptions, and methodologies applied in the Traffic Study Report is fair and reasonable; and (iii) all parties in the proposed Capital Increase Agreement agreed to deduct the dividend payable in determining the consideration of the Capital Increase, we are of the opinion that the basis of the consideration is appropriate.

IV. *Financial effect of the Capital Increase*

As stated in the Letter from the Board, upon Completion, Shangsans Co will remain as a non wholly-owned subsidiary of the Company, and the financial results of Shangsans Co will be consolidated into the consolidated financial statements of the Company.

It should be noted that the below analysis has assumed that full settlement of the consideration of the Capital Increase upon Completion and is for illustrative purposes only and do not purport to represent how the financial position of the Group will be upon full settlement of the consideration of the Capital Increase.

1. *Earnings*

Upon Completion, the result of Shangsans Co will continue to be consolidated into the consolidated financial statements of the Company while a higher portion of net profit after tax of Shangsans Co will be allocated to the non-controlling interests.

Further, as the Company maintains its control in Shangsans Co, the Capital Increase will be treated as equity transaction, no gain/loss will be reported in the Company's consolidated statement of profit or loss upon Completion.

2. *Net asset value*

Upon full settlement of the consideration of Capital Increase, Shangsans Co will receive approximately RMB13,174 million, thus the net asset value of Shangsans Co will be increased accordingly. After consolidating the financial results of Shangsans Co, the net asset value of the Group is expected to increase.

LETTER FROM THE INDEPENDENT FINANCIAL ADVISER

3. *Liquidity*

As at 30 June 2022, the Group had cash and bank balances of approximately RMB23,228 million and net current assets of approximately RMB42,744 million. Upon Completion, Shangsang Co will receive approximately RMB13,174 million in cash. The cash and the net current asset position of the Group will be improved due to the proceeds of the Capital Increase.

4. *Gearing*

As a result of the Capital Increase, assuming the total liabilities of the Group remain at the level as at 30 June 2022, the gearing ratio of the Group will be improved due to the proceeds of the Capital Increase.

OPINION AND RECOMMENDATIONS

Having considered the above principal factors, we are of the opinion that although the Capital Increase is not in the ordinary and usual course of business of the Group, it is in the interests of the Company and Shareholders as a whole and are on normal commercial terms and are fair and reasonable so far as the Independent Shareholders are concerned. Accordingly, we recommend the Independent Board Committee to advise the Independent Shareholders, and we advise the Independent Shareholders, to vote in favor of the ordinary resolutions to be proposed at the EGM for approving the proposed Capital Increase Agreement and the transactions contemplated thereunder.

Yours faithfully,

For and on behalf of

Octal Capital Limited

Alan Fung **Wong Wai Leung**

Managing Director *Executive Director*

Note: Mr. Alan Fung has been a responsible officer of Type 1 (dealing in securities) and Type 6 (advising on corporate finance) regulated activities since 2003. Mr. Fung has more than 28 years of experience in corporate finance and investment banking and has participated in and completed various advisory transactions in respect of mergers and acquisitions, connected transactions and transactions subject to the compliance to the Listing Rules and the Takeovers Code of listed companies in Hong Kong. Mr. Wong Wai Leung has been a responsible officer of Type 1 (dealing in securities), Type 6 (advising on corporate finance) regulated activities since 2008 and is also a responsible officer of Type 9 (asset management) regulated activities. Mr. Wong has accumulated decades of experience in corporate finance and investment banking and has participated in and completed various advisory transactions of listed companies in Hong Kong in respect of the Listing Rules and the Takeovers Code.

1. FINANCIAL INFORMATION OF THE GROUP

The published audited consolidated financial statements of the Group for each of the three years ended December 31, 2019, 2020 and 2021 and the unaudited consolidated financial statements of the Group for the six months ended June 30, 2022 are disclosed in the following documents, which can be accessed on both the websites of the Stock Exchange (www.hkexnews.hk) and the Company (www.zjec.com.cn).

- a. Annual report of the Company for the year ended December 31, 2019 (pages 102-280), which can be accessed via the link at:

<https://www1.hkexnews.hk/listedco/listconews/sehk/2020/0331/2020033100779.pdf>

- b. Annual report of the Company for the year ended December 31, 2020 (pages 108-263), which can be accessed via the link at:

<https://www1.hkexnews.hk/listedco/listconews/sehk/2021/0331/2021033100890.pdf>

- c. Annual report of the Company for the year ended December 31, 2021 (pages 102-277), which can be accessed via the link at:

<https://www1.hkexnews.hk/listedco/listconews/sehk/2022/0331/2022033101917.pdf>

- d. Interim report of the Company for the six months ended June 30, 2022 (pages 24-63), which can be accessed via the link at:

<https://www1.hkexnews.hk/listedco/listconews/sehk/2022/0831/2022083100595.pdf>

2. STATEMENT OF INDEBTEDNESS OF THE GROUP

As at the close of business on August 31, 2022, being the latest practicable date for the purpose of this indebtedness statement prior to the printing of this circular, the Group had aggregate outstanding indebtedness of approximately RMB55,428.70 million comprising the following:

- (i) secured bank borrowings of approximately RMB13,835.75 million, secured mainly by toll collection rights of the relevant expressways, trade receivables, and advertisement operation right;
- (ii) unsecured bank borrowings of approximately RMB629.06 million;
- (iii) unsecured bonds and notes liabilities of approximately RMB34,964.07 million;
- (iv) secured bonds and notes liabilities of approximately RMB834.26 million;
- (v) secured other borrowings of approximately RMB981.92 million; and
- (vi) unsecured other borrowings of approximately RMB4,183.64 million.

The Group provided a financial guarantee to a 50% owned joint venture of the Group, in favour of a bank for 50% of its outstanding bank borrowings and interest, and accrued off-balance sheet provision in light of the financial guarantee. As at August 31, 2022, the bank borrowings of such joint venture and accrued interest amounted to RMB758.00 million. The Directors consider that the fair value of the guarantee is insignificant at initial recognition and default by the guaranteed party is not probable, therefore the provision under ECL model for financial guarantee contract is not material as at August 31, 2022.

Zhejiang Shenjiahuhang Expressway Co., Ltd. and Zhejiang Zhoushan Bay Bridge Co., Ltd., the subsidiaries of the Company, pledged their rights of toll on expressway for their bank borrowing, as at August 31, 2022, the remaining bank loan balance was RMB1,859.60 million and RMB5,890.17 million respectively. Deqing County De'an Highway Construction Co., Ltd., a subsidiary of the Company, pledged its trade receivables for its bank borrowing, as at August 31, 2022, the remaining bank loan balance was RMB551.83 million. Zhejiang LongLiLiLong Expressway Co., Ltd., a subsidiary of the Company, pledged its right of toll on expressway for its bank and other borrowing, as at August 31, 2022, the remaining bank and other borrowing balance was RMB4,840.00 million. Jiaxing Zhajiasu Expressway Co., Ltd., a subsidiary of the Company, pledged its right of toll on expressway for its bank borrowing, as at August 31, 2022, the remaining bank loan balance was RMB1,518.32 million. As at August 31, 2022, the remaining balance of RMB806.31 million in respect of the Zhejiang Expressway's Huihang Expressway asset backed securities of RMB2,013.00 million issued on September 23, 2019 is secured by the Company.

Save as aforesaid or otherwise mentioned herein, and apart from intra-group liabilities and normal trade payables in the ordinary course of the business, the Group did not have any other outstanding borrowings, mortgages, charges, debentures, loan capital and overdraft, debt securities or other similar indebtedness, finance leases or hire purchase commitment, liabilities under acceptances or acceptance credits or any guarantees or other material contingent liabilities at the close of business on August 31, 2022, being the latest practicable date for the purpose of this statement of indebtedness prior to printing of this circular.

The Directors confirm that there has been no material change to the indebtedness and contingent liabilities of the Group since August 31, 2022 up to and including the Latest Practicable Date.

3. SUFFICIENCY OF WORKING CAPITAL

Taking into account the financial resources of the Group (including the Group's internal resources, available banking and other borrowing facilities) and the effects of the entering into of the proposed Capital Increase Agreement, in the absence of any unforeseen circumstances, the Directors are of the opinion that the Group will have sufficient working capital for the Group's requirements for at least the next 12 months from the date of the Circular.

4. MATERIAL CHANGES

As at the Latest Practicable Date, there has not been any material change in the financial or operation position or outlook of the Group since December 31, 2021, being the date to which the latest published audited consolidated financial statements of the Group were made up, up to and including the Latest Practicable Date.

5. FINANCIAL AND OPERATION PROSPECTS OF THE GROUP

The Group is principally engaged in the operation, management of high grade roads, as well as provision of security broking service and proprietary securities trading. The Company was incorporated on March 1, 1997 as an infrastructure company of the Zhejiang Provincial Government for investing in, developing and operating expressways and Class 1 roads in Zhejiang Province. The securities business is carried out by its subsidiary, Zheshang Securities, which was listed on the Shanghai Stock Exchange in June 2017. As at the Latest Practicable Date, the Group's revenue stream mainly consisted of (i) toll road operation; (ii) securities business; and (iii) other operation which includes hotel and catering business.

In respect of the toll road operation business, the Group will actively accelerate the construction of the intelligent Shanghai-Hangzhou-Ningbo Expressway (Phase II), enrich and improve data integration applications such as "Intelligent Expressway", and continue to steer the digital reform process. It will also carry out reforms of its systems and mechanisms, strengthen the building of talent team, and constantly activate its organic growth capabilities.

As to the securities business, the Group will continue to optimize its business structure, enhance the coordination and synergies between each business segment, in order to steadily move towards becoming a top-tier securities company in China. Zheshang Securities, the major operating company for conducting the securities business, will continue to grasp the market opportunities and improve its compliance and risk control standard as well as core competitiveness, resulting in a more stable and progressive operating results. Besides, it is expected that the business development and scale of operation of Shangsang Co and Zheshang Securities would be further enhanced and strengthened with the additional capital obtained through the Capital Increase.

The following is the valuation report dated June 13, 2022 on the entire equity interest in Shangsang Co for the purpose of incorporation in this circular.



仲量聯行

13 June 2022

The Board of Directors
Zhejiang Expressway Co., Ltd.
12th Floor, Block A, Dragon Century Plaza 1 Hangda Road
Hangzhou, China 310007

Dear Sirs,

In accordance with the instructions from Zhejiang Expressway Co., Ltd. (the “Company”), we have undertaken an investigation and analysis to express an independent opinion of the fair value of 100 percent equity interest in Zhejiang Shangsang Expressway Co., Ltd. (“Shangsang”) as at 30 April 2022 (the “Valuation Date”). The report which follows is dated 13 June 2022 (the “Report Date”).

The purpose of this valuation is a circular reference for the Company.

Our valuation was carried out on a fair value basis. Fair value is defined as *“the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.”*

Our valuation of the long-term equity investment of Shangsang was developed through the application of a market approach. Shangsang has 54.7894% ownership of Zheshang Security Co. Ltd. (Ticker: CH 601878). Assets for which there is an established secondary market may be valued by market approach. Our valuation of the 100 percent equity interest in Shangsang excluding the long-term equity investment was developed through the application of an income approach known as discount cash flow methodology. Under this method, the equity result depends on the present worth of future economic benefits to be derived from the projected income. Indication of the result is developed by discounting projected future net cash flows available for payment of shareholders’ interest to their present worth.

As part of our analysis, we have been furnished with information prepared by Shangsang and the Company regarding the subject business. We have relied to a considerable extent on such information in arriving at our opinion of value.

The conclusion of value is based on accepted valuation procedures and practices that rely substantially on our use of numerous assumptions and our consideration of various factors that are relevant to the operation of Shangsang. We have also considered various risks and uncertainties that have potential impact on the businesses. Further, while the assumptions and consideration of such matters are considered by us to be reasonable, they are inherently subject to significant business, economic and competitive uncertainties and contingencies, many of which are beyond the control of Shangsang and Jones Lang LaSalle Corporate Appraisal and Advisory Limited.

We do not intend to express any opinion on matters which require legal or other specialized expertise or knowledge, beyond what is customarily employed by valuers. Our conclusions assume continuation of prudent management of Shangsang over whatever period of time that is reasonable and necessary to maintain the character and integrity of the assets valued.

Based on the results of our investigation and analysis outlined in the report which follows, we are of the opinion that the fair value of 100 percent equity interest in Shangsang as at the Valuation Date is reasonably stated as below:

Valuation Date	30 April 2022
Fair Value of 100% Equity Interest	RMB27,259,932,536
Fair Value of 100% Equity Interest after Deducting Dividend Payable	RMB26,879,932,536

The following pages outline the factors considered, methodologies and assumptions employed in formulating our opinions and conclusions. All opinions are subject to the assumptions and limiting conditions contained therein.

Yours faithfully,
For and on behalf of
Jones Lang LaSalle Corporate Appraisal and Advisory Limited
Simon M.K. Chan
Executive Director

INTRODUCTION

This report has been prepared in accordance with instructions from Zhejiang Expressway Co., Ltd. (the “Company”) to express an independent opinion of the fair value of 100 percent equity interest in Zhejiang Shangsang Expressway Co., Ltd. (“Shangsang”) as at 30 April 2022 (the “Valuation Date”). The report which follows is dated 13 June 2022 (the “Report Date”).

PURPOSE OF VALUATION

The purpose of this valuation is a circular reference for Company.

BASIS OF VALUE

Our valuation was carried out on a fair value basis. Fair value is defined as *“the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.”*

We have conducted our valuation in accordance with HKFRS 13 – Fair Value Measurement and taken into account the International Valuation Standards issued by the International Valuation Standards Council. We planned and performed our valuation so as to obtain all the information and explanations which we considered necessary in order to provide us with sufficient evidence to express our opinion on the subject asset. We believe that the valuation procedures we employed provide a reasonable basis for our opinion.

BACKGROUND

Shang (Shangyu District) San (Sanmen County) Expressway (G1522) is a parallel route of Shenyang-Haikou Expressway (G15), an important trunk line in the National Highway Planning. It is connected to Hangzhou-Ningbo Expressway from Shangyu Guzhu Interchange in the north, and to Wudai Village, Zhudai Town, Sanmen County in the South, and Yongtaiwen Expressway. It passes through Shangyu District, Shengzhou City, Xinchang County, Tiantai County and Sanmen County, intercommunicates with Shaozhu Expressway and Yongjin Expressway, runs through the central and eastern part of Zhejiang Province, and is the main artery connecting Shaoxing City and Taizhou City.

The total investment of Shang San Expressway was RMB4.626 billion. It was designed for as a dual-two lane expressway in closed system with interchanges, with designed speed of 80-120 km/h. Shang San Expressway began construction in 1998, and was opened to traffic on 26th December 2000 with a concession period of 30 years. Shang San Expressway has a distance of 141.391 km and includes 13 toll stations named Donggan, Dongguanfu, Haoba, Shangpu, Zhangzhen, Sanjie, Shengzhou, Xinchang, Xinchangnan, Shuangcai, Baihe, Tiantai and Yangtuo, and Shengzhou service area, Xinchang service area and rooftop service area.

METHODOLOGY

In arriving at our assessed value, we have considered three generally accepted approaches, namely, market approach, cost approach and income approach.

Market Approach considers prices recently paid for similar assets, with adjustments made to market prices to reflect condition and utility of the appraised assets relative to the market comparative. Assets for which there is an established secondary market may be valued by this approach.

Benefits of using this approach include its simplicity, clarity, speed and the need for few or no assumptions. It also introduces objectivity in application as publicly available inputs are used. However, one has to be wary of the hidden assumptions in those inputs as there are inherent assumptions on the value of those comparable assets. It is also difficult to find comparable assets. Furthermore, this approach relies exclusively on the efficient market hypothesis.

Cost Approach considers the cost to reproduce or replace in new condition the assets appraised in accordance with current market prices for similar assets, with allowance for accrued depreciation or obsolescence present, whether arising from physical, functional or economic causes. The cost approach generally furnishes the most reliable indication of value for assets without a known secondary market.

Despite the simplicity and transparency of this approach, it does not directly incorporate information about the economic benefits contributed by the subject asset.

Income Approach is the conversion of expected periodic benefits of ownership into an indication of value. It is based on the principle that an informed buyer would pay no more for the project than an amount equal to the present worth of anticipated future benefits (income) from the same or a substantially similar project with a similar risk profile.

This approach allows for the prospective valuation of future profits and there are numerous empirical and theoretical justifications for the present value of expected future cash flows. However, this approach relies on numerous assumptions over a long time horizon and the result may be very sensitive to certain inputs. It also presents a single scenario only.

Selection of Valuation Approach and Methodology

In our opinion, the market approach is appropriate for valuing Shangsans' long-term equity investment (Zheshang Security Co. Ltd. (Ticker: CH 601878)). The market approach requires market transactions of identical assets or comparable assets as an indication of value. As Zheshang Security Co. Ltd. is a listing company and there is quoted price in active market as at the Valuation Date which could be an indication of fair value.

However, the market approach and cost approach are inappropriate for valuing Shangsans excluding the long-term equity investment. Firstly, the market approach requires market transactions of comparable assets as an indication of value. However, we have not identified any current market transactions which are comparable. Secondly, the cost approach does not directly incorporate information about the economic benefits contributed by the underlying asset. We have therefore relied on the income approach in determining our opinion of value for Shangsans excluding the long-term equity investment.

In this study, the value of the total equity was developed through the application of an income approach technique known as discounted cash flow method to devolve the future value of the business into a present fair value. This method eliminates the discrepancy in time value of money by using a discount rate to reflect all business risks including intrinsic and extrinsic uncertainties in relation to the business.

Under this method, value depends on the present worth of future economic benefit to be derived from the projected income. Indications of value have been developed by discounting projected future net cash flows available for payment of shareholders' interest to their present worth at discount rate which in our opinion is appropriate for the risks of the business. In considering the appropriate discount rate to be applied, we have taken into account a number of factors including the current cost of finance and the considered risk inherent in the business.

SOURCES OF INFORMATION

This report was compiled after consideration of all relevant information obtained from Shangsang. Documents received include, but were not limited to:

- Documents of background and operation of Shangsang;
- Financial information and forecasting of Shangsang as at the Valuation Date;
- Details and Articles relating to the toll road; and
- Traffic Study Report prepared by WB Group International Limited (WBG).

We conducted discussions with Shangsang and Company's senior management. We have relied to a considerable extent on information provided by the management in arriving at our opinion of value. We have also analyzed the financial information and documents provided and conducted research using various sources.

TRAFFIC AND REVENUE FORECASTING

We have considered and relied to a considerable extent on the traffic flow and revenue study (the "Traffic Study Report") for Shangsang prepared by WBG.

We have had the discussions about the key assumptions in Traffic Study Report together with the management of Shangsang, Zhejiang Expressway and WBG. We understand WBG is a professional expert with extensive experience in expressway industry and the underlying assumptions used in the Traffic Study Report are in line with industry practice. We are of the opinion that the assumptions adopted in the study are acceptable.

WBG prepared a projection for the traffic flow and revenue with respect to the subject toll road covering the respective concession period. The projection is mainly based on the expected annual GDP growth rate, vehicle types, existing road network and future transportation plan in the target area.

We believe that the traffic growth rate and the toll charge growth rate projected by WBG are reasonable and accurate. Therefore, we have adopted their findings in developing the forecast for Shangsang.

MAJOR ASSUMPTIONS

Assumptions considered to have significant sensitivity effects in this valuation have been evaluated in order to provide a more accurate and reasonable basis for arriving at our assessed value.

The following key assumptions in determining the fair value of the equity interest have been made:

- We assume continuation of prudent and effective management policies over whatever period of time that is considered to be necessary in order to maintain the character and integrity of the assets valued;
- We have assumed that there will be no material change in the existing political, legal, technological, fiscal or economic conditions, which might adversely affect the business of Shangsang;
- We have assumed that the operational and contractual terms stipulated in the relevant contracts and agreements will be honored;
- We have been provided with copies of the operating licenses and company incorporation documents. We have assumed such information to be reliable and legitimate. We have relied to a considerable extent on such information provided in arriving at our opinion of value;
- Natural weather can have an impact on toll roads, including flooding and other types of inclement weather. We have assumed that no extended closure will occur;
- We have assumed shareholder loan when necessary in the valuation;
- We have assumed the accuracy of the financial and operational information such as management accounts, contractual agreements and manufacturing capabilities, provided to us by Shangsang and the Company relied to a considerable extent on such information in arriving at our opinion of value; and
- We have assumed that there are no hidden or unexpected conditions associated with the assets valued that might adversely affect the reported values. Furthermore, we assume no responsibility for changes in market conditions after the Valuation Date.

Our opinion of value was calculated using a financial projection based on a traffic flow and toll income projection prepared by WBG, and a management projection of surtax, cost of services, management expenses and others, provided to us by Shangsang and the Company.

The valuation result as at the Valuation Date is mainly based on the following assumptions:

Traffic the toll revenue

The base case scenario as projected by WBG has been adopted as the traffic flow and toll revenue for Shangsans.

Toll Revenue	2022.5-12E	2023	2024	2025	2026	2027	2028	2029	12/25/2030
Toll Revenue									
(including Tax)	¥835,626,612	1,265,540,000	1,388,730,000	1,472,310,000	1,518,680,000	1,547,890,000	1,596,140,000	1,634,290,000	1,665,760,000
Growth rate	-7.74%	8.37%	9.73%	6.02%	3.15%	1.92%	3.12%	2.39%	1.93%
Toll Revenue									
(excluding Tax)	811,287,973	1,228,679,612	1,348,281,553	1,429,427,184	1,474,446,602	1,502,805,825	1,549,650,485	1,586,689,320	1,617,242,718

Surtax

The surtax includes urban maintenance and construction tax, education surcharge, local education surcharge, stamp duty, vehicle and vessel use tax, property tax and land use tax, etc.

Surtax	2022.5-12E	2023	2024	2025	2026	2027	2028	2029	12/25/2030
Total Surtax	4,614,344	6,134,681	6,570,327	6,865,898	7,029,880	7,133,177	7,303,807	7,438,720	7,522,735
% of revenue	0.57%	0.50%	0.49%	0.48%	0.48%	0.47%	0.47%	0.47%	0.47%

Cost of Service

Cost of services comprises mainly of depreciation and amortization, maintenance cost, operation expense, labor cost and other costs.

Maintenance cost includes road maintenance cost and equipment maintenance cost. Road maintenance cost is based on the road mileage multiplied by the various unit road maintenance cost and considering CPI factor as well. Equipment maintenance cost includes regular maintenance and special maintenance costs. Equipment maintenance cost is based on the historical level and the budget of Shangsans. It is assumed to grow on 2.3% per annum from 2023 and onward, except for 10% for 2026 to 2028, because the management estimated that the electromechanical replacement cost of will be increased during this period.

Operation expenses mainly include ETC (Electronic Toll Collection) service fee, ETC ticket fee and other fixed operating expenses. The ETC service fee is projected to be paid at 0.125% of the toll revenue. ETC ticket fee is calculated at 0.02% of revenue. Other operation expenses are assumed to stay with historical level during projection period.

According to the management of Shangsans and the Company, it is estimated that the headcount will be controlled, and the wages are assumed to be increased by 3% per annum during the projection period.

Vehicle usage expense, labor protection expense, office expense and other expenses are assumed to stay with historical level during the projection period.

Cost of Service	2022.5-12E	2023	2024	2025	2026	2027	2028	2029	2030/12/25
Depreciation	33,279,338	48,588,053	141,991,477	135,391,901	133,054,119	129,628,560	132,447,251	134,973,424	131,977,731
Amortization	90,544,916	135,817,374	135,817,374	135,817,374	135,815,558	135,817,374	135,817,374	135,817,374	135,817,374
Road Maintenance Cost	73,150,823	87,420,000	89,470,000	91,520,000	93,570,000	95,700,000	97,930,000	100,230,000	100,854,411
Equipment Maintenance Cost	8,108,691	7,067,037	7,229,579	7,395,860	8,135,446	8,948,990	9,843,889	10,070,299	10,132,569
Operation Expense	6,669,593	9,674,822	9,849,697	9,968,343	10,034,167	10,075,633	10,144,126	10,198,282	10,113,448
Labor cost	82,156,283	126,931,458	130,739,401	134,661,583	138,701,431	142,862,474	147,148,348	151,562,798	153,591,784
Vehicle Usage	1,833,550	2,263,250	2,263,250	2,263,250	2,263,250	2,263,250	2,263,250	2,263,250	2,226,046
Labour Protection	1,557,164	1,557,164	1,557,164	1,557,164	1,557,164	1,557,164	1,557,164	1,557,164	1,531,567
Office Expense	310,519	407,068	407,068	407,068	407,068	407,068	407,068	407,068	400,376
Other Expense	1,113,506	1,248,411	1,248,411	1,248,411	1,248,411	1,248,411	1,248,411	1,248,411	1,227,889
Total Cost of Service	298,724,383	420,974,637	520,573,421	520,230,953	524,786,614	528,508,923	538,806,881	548,328,069	547,873,195
<i>GP margin</i>	63%	66%	61%	64%	64%	65%	65%	65%	66%

Administrative Expenses

The main proportion of administrative expense is professional fee, which is subjected to stay with historical level during projection period.

Administrative Expense	2022.5-12E	2023	2024	2025	2026	2027	2028	2029	12/25/2030
Total administrative expense	–	180,000	180,000	180,000	180,000	180,000	180,000	180,000	180,000
<i>As % of Total Revenue</i>		0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%

Finance Expense

The main proportion of finance expense is financial institution fee. Based on historical average, it is forecasted as 0.003% of revenue.

Financial Expenses	2022.5-12E	2023	2024	2025	2026	2027	2028	2029	12/25/2030
Financial institution Fee	23,989	36,331	39,867	42,266	43,598	44,436	45,821	46,916	47,820
<i>As % of Total Revenue</i>	0.003%	0.003%	0.003%	0.003%	0.003%	0.003%	0.003%	0.003%	0.003%

Non-operating Income

Non-operating income mainly includes the net income from road compensation. It is assumed to stay with historical level during projection period.

Non-operating Income	2022.5-12E	2023	2024	2025	2026	2027	2028	2029	12/25/2030
Non-operating Income	–	341,192	341,192	341,192	341,192	341,192	341,192	341,192	335,583

Income Tax

The income tax rate is assumed to be 25% during the projection period.

Income Tax	2022.5-12E	2023	2024	2025	2026	2027	2028	2029	2030/12/25
EBT	507,925,256	801,695,155	821,259,130	902,449,259	942,747,703	967,280,481	1,003,655,168	1,031,036,806	1,061,954,552
Income Tax rate	25%	25%	25%	25%	25%	25%	25%	25%	25%
Income Tax	<u>126,981,314</u>	<u>200,423,789</u>	<u>205,314,782</u>	<u>225,612,315</u>	<u>235,686,926</u>	<u>241,820,120</u>	<u>250,913,792</u>	<u>257,759,202</u>	<u>265,488,638</u>

Capital Expenditure, Depreciation and Amortization

Capital expenditure is forecasted the by the management of Shangsans. Due to the particularity of expressway industry, massive investment has been invested in road, structures and buildings at the very beginning, therefore the capital expenditure in forecast period is mainly for maintenance and renovation from time to time.

Capex, D&A	2022.5-12E	2023	2024	2025	2026	2027	2028	2029	2030/12/25
Update Capex	62,766,139	8,178,159	34,174,860	10,796,100	10,958,750	30,659,750	21,820,060	27,996,990	-
Additional Capex	<u>173,291,152</u>	<u>164,875,000</u>	<u>164,875,000</u>	<u>162,875,000</u>	-	-	-	-	-
Total Capex	<u>236,057,291</u>	<u>173,053,159</u>	<u>199,049,860</u>	<u>173,671,100</u>	<u>10,958,750</u>	<u>30,659,750</u>	<u>21,820,060</u>	<u>27,996,990</u>	-
Depreciation and Amortization	<u>123,824,254</u>	<u>184,405,427</u>	<u>277,808,851</u>	<u>271,209,275</u>	<u>268,869,677</u>	<u>265,445,934</u>	<u>268,264,625</u>	<u>270,790,798</u>	<u>267,795,105</u>

Long-term Equity Investment

As at the valuation date, Shangsans has 54.7894% ownership of Zheshang Security Co. Ltd. (Ticker: CH 601878). The total market capitalization of Zheshang Security Co. Ltd. is RMB35,717,934,600 as at the Valuation Date. This is a directly quoted price of equity interest in Shangsans, which could be an indication of fair value. We have therefore relied solely on the market approach in determining our opinion of value.

Valuation Date	4/30/2022
100% Market Capitalization	35,717,934,600
Ownership of Shangsans	54.7894%
Long-term Equity investment	19,569,642,060

Net Excess Asset

As at the valuation date, Net excess asset is as below.

Net Excess Asset

Valuation Date	4/30/2022
Cash	2,348,929,075
Receipts in Advance	184,420
Deferred Revenue	17,665,284
Deferred Tax Liability	40,601,082
Net Excess Asset	<u>2,290,478,289</u>
Dividend Payable*	<u>380,000,000</u>
Net Excess Asset After Deducting Dividend Payable	<u><u>1,910,478,289</u></u>

*Notes: According to the shareholders meeting of Shangsang on May 31, 2022, Shangsang plans to distribute profits in 2021 with an amount of RMB380,000,000.

DISCOUNT RATE

In applying the discounted cash flow method, it is necessary to determine an appropriate discount rate for the assets under review. The discount rate represents an estimate of the rate of return required by a third-party investor for an investment of this type. The rate of return expected from an investment by an investor relates to perceived risk. Risk factors relevant in our selection of an appropriate discount rate include:

1. Interest rate risk, which measures variability of returns caused by changes in the general level of interest rates.
2. Purchasing power risk, which measures loss of purchasing power over time due to inflation.
3. Liquidity risk, which measures the ease with which an instrument can be sold at the prevailing market price.
4. Market risk, which measures the effects of the general market on the price behavior of securities.
5. Business risk, which measures the uncertainty inherent in projections of operating income.

Consideration of risk, burden of management, degree of liquidity, and other factors affect the rate of return acceptable to a given investor in a specific investment. An adjustment for risk is an increment added to a base or safe rate to compensate for the extent of risk believed involved in the investment.

Required Return on Equity Capital

We have used Capital Assets Pricing Model (the “CAPM”) to estimate the required return on equity capital. The CAPM is a fundamental tenet of modern portfolio theory which has been generally accepted basis for marketplace valuations of equity capital. The CAPM technique is widely accepted in the investment and financial analysis communities for the purpose of estimating a company’s required return on equity capital.

The equation of CAPM is shown as follow:

$$\text{Expected Required Return on Equity} = \text{Risk Free} + \text{Nominal Beta } (\beta) \times \text{Risk Premium} + \varepsilon$$

The return on equity required of a company represents the total rate of return investors expect to earn, through a combination of dividends and capital appreciation, as a reward for risk taking. The Capital Asset Pricing Model (“CAPM”) is used to calculate the required rate of return on equity investment by using publicly-traded companies.

Parameters for CAPM

In determining the equity discount rate for the Shangsans, the following parameters have been used as at the Valuation Date:

Valuation Date	30 April 2022
Listed Market	Hong Kong
Risk Free Rate	2.90% (Long-term (10-year) U.S. Treasury Bills and Bond Yield at Valuation date; Source: Bloomberg)
Market Risk Premium	7.25% (Long-horizon expected equity risk premium (historical): large company stock total returns minus long-term government bond income returns; Source: Duff & Phelps 2021 SBBI Valuation Handbook)
Estimated Beta	0.62 (Indicated by the average beta of listed companies in similar industry as at Valuation Date, Source: Bloomberg)
CAPM	7.42% (2.9% + 0.62 x 7.25%)

Comparable companies

In determining the estimated beta, a list of comparable companies was identified. The selection criteria include the followings:

- The shares of comparable companies are publicly listed in The Stock Exchange of Hong Kong Limited;
- The companies derive most, if not all, of their revenues from the toll road business in China;
- The beta of comparable companies from Bloomberg is statistically significant; and
- The comparable companies are searchable in Bloomberg.

To the best knowledge and ability of ours, the companies listed in the table below represent an exhaustive list of companies which meet the selection basis mentioned above.

Details of these comparable companies are shown below:

Stock Code	Company Name
107 HK	Sichuan Expressway Company Limited
177 HK	Jiangsu Expressway Company Limited
548 HK	Shenzhen Expressway Company Limited
576 HK	Zhejiang Expressway Co., Ltd.
737 HK	Shenzhen Investment Holdings Bay Area Development Company Limited
995 HK	Anhui Expressway Company Limited
1052 HK	Yuexiu Transport Infrastructure Limited
1785 HK	Chengdu Expressway Co., Ltd.

Discount Rate

Valuation Date	30 April 2022
Listed Market	Hong Kong
CAPM	7.42%
Country Risk Premium	0.59% (with reference to Dr. Aswath Damodaran's Research, NYU, 2021)
Liquidity Premium	2.0% (with reference to "Marketability and Value: Measuring the Illiquidity Discount" of Stern School of Business, NYU, June 2005, by Aswath Damodaran)
Cost of Equity	10.01%

To calculate the cost of equity of Shangsang, we have considered country risk premium and liquidity premium besides CAPM result to justify the unique risk attached with Shangsang compared with risk of comparable companies. These risks are referred to various research paper and we have made assessment on the assumption adopted in the research and adjustment of the risks to make sure the risks applied are reasonable and justified.

Considering the parameters in determining the CAPM, the risk free rate and market return are based on the parameter of US market, which is different from Shangsang. Hence a country risk premium is considered to adjust CAPM to reflect the cost of equity of Shangsang. Per the latest research on country risk premium performed by Dr. Aswath Damodaran (http://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/ctryprem.html).

As suggested by “Marketability and Value: Measuring the Illiquidity Discount”, a 4% of general liquidity premium is normally applied for general industrial companies. Since the liquidity premium in this study is estimated using the returns of venture capital investor over the return on traded stocks, while venture capital investors usually focus on emerging and fast-growing industry. Having considered the characteristics of the expressway industry, which is a defensive industry, the cash flow of an expressway company is believed more stable than other industry. We believe the liquidity premium for expressway industry could be substantially lower than the rate adopted in the research. We thus, applied 2% as illiquidity premium in the valuation exercise of Shangsang.

SENSITIVITY ANALYSES

Discount Rate

The following table summarize the resulting values based on changes of discount rate:

Discount Rate (%)	Fair Value of 100% Equity Interest (RMB)
10.51%	27,142,751,919
10.01%	27,259,932,536
9.51%	27,381,150,663

TOLL REVENUE IN EXTENDED 79-DAY

According to Traffic Study Report prepared by WBG, in the beginning of 2020, the Ministry of Transport issued a Notice on “Lifting of Toll Charges on Toll Highways During the Control Period of the Novel Coronavirus Disease (Jiao Gong Lu Ming Dian [2020] No. 62)” A subsequent Notice on “Resumption of Toll Collection on Toll Highways” was also issued by the Ministry of Transport. From February 17, 2020 to May 5, 2020 (79 days), all vehicles were exempted from charges on toll highways. With reference to the Guangxi Zhuang Autonomous Region approach, “During the COVID-19 epidemic prevention and control period, free passage time will not be counted in the original concession period. After the free passage period, the deadline for the original concession period of all toll road in the region will be extended according to the cumulative 79 days of free passage (from February 17, 2020 to May 5, 2020).”

Original forecast period	2030/12/25
Extend 79-day	2031/3/14
Toll revenue increase	378,967,387
Fair value of Shangsans increase	82,475,367

VALUATION COMMENTS

The conclusion of value is based on accepted valuation procedures and practices that rely substantially on the use of numerous assumptions and the consideration of many uncertainties, not all of which can be easily quantified or ascertained. Further, while the assumptions and consideration of such matters are considered by us to be reasonable, they are inherently subject to significant business, economic and competitive uncertainties and contingencies, many of which are beyond the control of Shangsans, the Company and Jones Lang LaSalle Corporate Appraisal and Advisory Limited.

We do not intend to express any opinion on matters which require legal or other specialized expertise or knowledge, beyond what is customarily employed by valuers. Our conclusions assume continuation of prudent management of Shangsans over whatever period of time that is reasonable and necessary to maintain the character and integrity of the assets valued.

We are instructed to provide our opinion of value as per the valuation date only. It is based on economic, market and other conditions as they exist on, and information made available to us as of, the valuation date and we assume no obligation to update or otherwise revise these materials for events in the time since then. In particular, it has come to our attention that since the Valuation Date, the outbreak of Novel Coronavirus disease (COVID-19) has caused significant disruption to economic activities around the world. It may also have a negative impact towards investment sentiment, and hence any form of required rate of return as well as liquidity of any asset. As of the Report Date, it is uncertain how long the disruption will last and to what extent it will affect the economy. As a result, it has caused volatility and uncertainty that values may change significantly and unexpectedly even over short periods. The period required to negotiate a transaction may also extend considerably beyond the normally expected period, which would also reflect the nature and size of the asset. Readers are reminded that we do not intend to provide an opinion of value as of any date after the Valuation Date in this Report.

RISK FACTORS

➤ Traffic Volume

Traffic volume is affected by a number of factors including alternative means of transport, toll rates, fuel prices, and general economic conditions in the region. Any significant change in these factors could have a material impact on the profitability of the toll road. Furthermore, any major maintenance in the near future will also affect the traffic volume of Shangsans.

➤ **Traffic Forecast**

The forecast traffic flow and revenue of Shangsang are affected by a number of statistical factors, including the selection of samples, variance of independent variables, stability of correlations, etc. Any development in the future which deviates from the historical trends may affect the value of Shangsang.

➤ **Uncertainty of Market Competition**

The profitability of Shangsang may be affected by the existence of other means of transportation, including railways and planes and alternative routes to the toll roads. There can be no assurance that better quality competing roads which may allow for higher travelling speed and lower or even free tolls will not be built in the latter years of this projection.

➤ **Toll Rate Increase**

The profitability of Shangsang is affected by the possibility of toll rate increases in the future. Any application for increase in the toll rate is required to be approved by local authorities. Any deviation from the estimated toll rate increase applied in this valuation will affect the resulting value.

OPINION OF VALUE

Based on the results of our investigation and analysis outlined in the report which follows, we are of the opinion that the fair value of 100 percent equity interest in Shangsang as at the Valuation Date is reasonably stated as below:

Valuation Date	30 April 2022
Fair Value of 100% Equity Interest	RMB27,259,932,536
Fair Value of 100% Equity Interest after Deducting Dividend Payable	RMB26,879,932,536

LIMITING CONDITIONS

This report and opinion of values are subject to our Limiting Conditions as included in Exhibit A of this report.

Yours faithfully,
For and on behalf of
Jones Lang LaSalle Corporate Appraisal and Advisory Limited
Simon M.K. Chan
Executive Director

EXHIBIT A – LIMITING CONDITIONS

1. In the preparation of our reports, we relied on the accuracy, completeness and reasonableness of the financial information, forecast, assumptions and other data provided to us by the Company/engagement parties and/or its representatives. We did not carry out any work in the nature of an audit and neither are we required to express an audit or viability opinion. We take no responsibility for the accuracy of such information. Our reports were used as part of the Company's/engagement parties' analysis in reaching their conclusion of value and due to the above reasons, the ultimate responsibility of the derived value of the subject property rests solely with the Company/engagement parties.
2. We have explained as part of our service engagement procedure that it is the director's responsibility to ensure proper books of accounts are maintained, and the financial information and forecast give a true and fair view and have been prepared in accordance with the relevant standards and companies ordinance.
3. Public information and industry and statistical information have been obtained from sources we deem to be reputable; however we make no representation as to the accuracy or completeness of such information, and have accepted the information without any verification.
4. The management and the Board of the Company/engagement parties have reviewed and agreed on the report and confirmed that the basis, assumptions, calculations and results are appropriate and reasonable.
5. Jones Lang LaSalle Corporate Appraisal and Advisory Limited shall not be required to give testimony or attendance in court or to any government agency by reason of this exercise, with reference to the project described herein. Should there be any kind of subsequent services required, the corresponding expenses and time costs will be reimbursed from you. Such kind of additional work may incur without prior notification to you.
6. No opinion is intended to be expressed for matters which require legal or other specialized expertise, which is out of valuers' capacity.
7. The use of and/or the validity of the report is subject to the terms of engagement letter/proposal and the full settlement of the fees and all the expenses.
8. Our conclusions assume continuation of prudent and effective management policies over whatever period of time that is considered to be necessary in order to maintain the character and integrity of the assets valued.

9. We assume that there are no hidden or unexpected conditions associated with the subject matter under review that might adversely affect the reported review result. Further, we assume no responsibility for changes in market conditions, government policy or other conditions after the Valuation/Reference Date. We cannot provide assurance on the achievability of the results forecasted by the Company/engagement parties because events and circumstances frequently do not occur as expected; difference between actual and expected results may be material; and achievement of the forecasted results is dependent on actions, plans and assumptions of management.
10. This report has been prepared solely for internal use purpose. The report should not be otherwise referred to, in whole or in part, or quoted in any document, circular or statement in any manner, or distributed in whole or in part or copied to any third party without our prior written consent. Even with our prior written consent for such, we are not be liable to any third party except for our client for this report. Our client should remind of any third party who will receive this report and the client will need to undertake any consequences resulted from the use of this report by the third party. We shall not under any circumstances whatsoever be liable to any third party.
11. This report is confidential to the client and the calculation of values expressed herein is valid only for the purpose stated in the engagement letter/or proposal as of the Valuation/Reference Date. In accordance with our standard practice, we must state that this report and exercise is for the use only by the party to whom it is addressed to and no responsibility is accepted with respect to any third party for the whole or any part of its contents.
12. Where a distinct and definite representation has been made to us by party/parties interested in the assets valued, we are entitled to rely on that representation without further investigation into the veracity of the representation.
13. You agree to indemnify and hold us and our personnel harmless against and from any and all losses, claims, actions, damages, expenses or liabilities, including reasonable attorney's fees, to which we may become subjects in connection with this engagement. Our maximum liability relating to services rendered under this engagement (regardless of form of action, whether in contract, negligence or otherwise) shall be limited to the fee paid to us for the portion of its services or work products giving rise to liability. In no event shall we be liable for consequential, special, incidental or punitive loss, damage or expense (including without limitation, lost profits, opportunity costs, etc.), even if it has been advised of their possible existence.
14. We are not environmental, structural or engineering consultants or auditors, and we take no responsibility for any related actual or potential liabilities exist, and the effect on the value of the asset is encouraged to obtain a professional assessment. We do not conduct or provide such kind of assessments and have not considered the potential impact to the subject property.

15. This exercise is premised in part on the historical financial information and future forecast provided by the management of the Company/engagement parties and/or its representatives. We have assumed the accuracy and reasonableness of the information provided and relied to a considerable extent on such information in our calculation of value. Since projections relate to the future, there will usually be differences between projections and actual results and in some cases, those variances may be material. Accordingly, to the extent any of the above-mentioned information requires adjustments, the resulting value may differ significantly.

16. This report and the conclusion of values arrived at herein are for the exclusive use of our client for the sole and specific purposes as noted herein. Furthermore, the report and conclusion of values are not intended by the author, and should not be construed by the reader, to be investment advice or as financing or transaction reference in any manner whatsoever. The conclusion of values represents the consideration based on the information furnished by the Company/engagement parties and other sources. Actual transactions involving the subject assets/business might be concluded at a higher or lower value, depending upon the circumstances of the transaction and the business, and the knowledge and motivation of the buyers and sellers at that time.

17. The management or staff of the Company/engagement parties and/or its representatives have confirmed to us that the transaction or themselves or the parties involved in the pertained assets or transaction are independent to our firm and JLL in this valuation or calculation exercise. Should there be any conflict of interest or potential independence issue that may affect our independency in our work, the Company/engagement parties and/or its representatives should inform us immediately and we may need to discontinue our work and we may charge our fee to the extent of our work performed or our manpower withheld or engaged.

EXHIBIT B – VALUERS’ PROFESSIONAL DECLARATION

The following valuers certify, to the best of their knowledge and belief, that:

- Information has been obtained from sources that are believed to be reliable. All facts which have a bearing on the value concluded have been considered by the valuers and no important facts have been intentionally disregarded.
- The reported analyses, opinions, and conclusions are subject to the assumptions as stated in the report and based on the valuers’ personal, unbiased professional analyses, opinions, and conclusions. The valuation exercise is also bounded by the limiting conditions.
- The reported analyses, opinions, and conclusions are independent and objective.
- The valuers have no present or prospective interest in the asset that is the subject of this report, and have no personal interest or bias with respect to the parties involved.
- The valuers’ compensation is not contingent upon the amount of the value estimate, the attainment of a stipulated result, the occurrence of a subsequent event, or the reporting of a predetermined value or direction in value that favours the cause of the client.
- The analyses, opinions, and conclusions were developed, and this report has been prepared, in accordance with the International Valuation Standards published by the International Valuation Standards Council.
- The under mentioned persons provided professional assistance in the compilation of this report:

Simon M. K. Chan

Executive Director

Michael Q. Ding

Senior Director

Joyce J. Xu

Director

Yao Y. Luo

Analyst

EXHIBIT C – VALUATION MODEL

Business Equity Valuation

Subject Company: Zhejiang Shangsang Expressway Co., Ltd

Valuation Date: 2022/04/30

Unit: CNY

	2022.5-12E	2023	2024	2025	2026	2027	2028	2029	2030/12/25	Terminal
Revenue	811,287,973	1,228,679,612	1,348,281,553	1,429,427,184	1,474,446,602	1,502,805,825	1,549,650,485	1,586,689,320	1,617,242,718	
Growth		8.37%	9.73%	6.02%	3.15%	1.92%	3.12%	2.39%	1.93%	
Business Tax	4,614,344	6,134,681	6,570,327	6,865,898	7,029,880	7,133,177	7,303,807	7,438,720	7,522,735	
Business Tax Rate	0.57%	0.50%	0.49%	0.48%	0.48%	0.47%	0.47%	0.47%	0.47%	
COGS	298,724,383	420,974,637	520,573,421	520,230,953	524,786,614	528,508,923	538,806,881	548,328,069	547,873,195	
Gross Profit	507,949,245	801,570,294	821,137,805	902,330,334	942,630,109	967,163,725	1,003,539,797	1,030,922,531	1,061,846,788	
GP Margin	62.61%	65.24%	60.90%	63.13%	63.93%	64.36%	64.76%	64.97%	65.66%	
Operating Expense	-	180,000	180,000	180,000	180,000	180,000	180,000	180,000	180,000	
% of Revenue	0.00%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	
EBIT	507,949,245	801,390,294	820,957,805	902,150,334	942,450,109	966,983,725	1,003,359,797	1,030,742,531	1,061,666,788	
EBIT Margin	62.61%	65.22%	60.89%	63.11%	63.92%	64.35%	64.75%	64.96%	65.65%	
Financial Expense	23,989	36,331	39,867	42,266	43,598	44,436	45,821	46,916	47,820	
Non-Operating Income	-	341,192	341,192	341,192	341,192	341,192	341,192	341,192	335,583	
EBT	507,925,256	801,695,155	821,259,130	902,449,259	942,747,703	967,280,481	1,003,655,168	1,031,036,806	1,061,954,552	
Income Tax	126,981,314	200,423,789	205,314,782	225,612,315	235,686,926	241,820,120	250,913,792	257,759,202	265,488,638	
Net Income	380,943,942	601,271,366	615,944,347	676,836,944	707,060,777	725,460,361	752,741,376	773,277,605	796,465,914	
Net Profit Margin	46.96%	48.94%	45.68%	47.35%	47.95%	48.27%	48.57%	48.74%	49.25%	
Add: D&A	123,824,254	184,405,427	277,808,851	271,209,275	268,869,677	265,445,934	268,264,625	270,790,798	267,795,105	
Less: Capex	236,057,291	173,053,159	199,049,860	173,671,100	10,958,750	30,659,750	21,820,060	27,996,990	-	
Less: increase in NWC	(273,185,059)	111,509,115	132,085,248	88,979,528	48,306,081	29,562,317	50,170,359	39,333,731	-	
Add: Collection of NWC										1,754,125,199
Free Cash Flow to Equity	541,895,964	501,114,520	562,618,090	685,395,591	916,665,623	930,684,227	949,015,582	976,737,681	1,064,261,018	1,754,125,199
Date adjustment factor	0.33	1.17	2.17	3.17	4.17	5.17	6.17	7.17	8.16	8.65
Discount factor (mid-point)	10.01%	1.03	1.12	1.23	1.35	1.49	1.64	1.80	1.98	2.18
PV of FCFE	524,938,791	448,344,258	457,579,510	506,725,119	616,056,185	568,577,909	527,034,715	493,085,319	488,777,255	768,693,127

FCFE Valuation Summary

PV of FCFE forecast	5,399,812,187
Long-term equity investment	19,569,642,060
Net Excess Asset	2,290,478,289

100% Equity Value 27,259,932,536

Net Excess Asset After Deducting Dividend Payable 1,910,478,289

100 % Equity Value after Deducting Dividend Payable 26,879,932,536

EXHIBIT D – BETA CALCULATION

Comparable Companies (HK)	Ticker	D/E Ratio	Levered Beta	Effective Tax Rate	Unlevered Beta	Weight
Sichuan Expressway Company Limited	107HK	3.85	0.62	15%	0.14	12.5%
Jiangsu Expressway Company Limited	177HK	0.86	0.54	24%	0.33	12.5%
Zhejiang Expressway Co., Ltd.	576HK	3.26	0.56	23%	0.16	12.5%
Shenzhen Expressway Co., Ltd.	548HK	1.99	0.57	15%	0.21	12.5%
Anhui Expressway Company Limited	995HK	0.60	0.57	27%	0.40	12.5%
Area Development Company Limited	737HK	0.28	0.53	12%	0.42	12.5%
Yuexiu Transport Infrastructure Limited	1052HK	2.65	0.52	19%	0.17	12.5%
Chengde Expressway Co., Ltd.	1785HK	1.04	0.53	17%	0.28	12.5%

Equity Market

HK Market

Unlevered Beta	0.26
D/E Ratio	1.82
Tax Rate	25.00%
Levered Beta	0.62
Risk Free Rate	2.90%
Market Risk Premium	7.25%
CAPM	7.42%
Country Risk Premium	0.59%
Liquidity Premium	2.00%
Cost of Equity	10.01%

The following is the report on traffic and toll revenue forecast study dated June 6, 2022 for the purpose of incorporation in this circular.

1 INTRODUCTION

1.1 Study Background

WB Group Consulting (Shenzhen) Company Limited (“the Consultant”) was commissioned by Zhejiang ShangSan Expressway Company Limited (“ShangSan Expressway Co. Ltd”) to conduct an independent study on the traffic volume and toll revenue forecasts on the Expressway from Shangyu District to Sanmen County (“the Project Highway”) in the Zhejiang Province. This report presents the final result of traffic volume and toll revenue forecasts from 2022 to 2030.

Shang (Shangyu District) San (Sanmen County) Expressway (G1522) is a parallel route of Shenyang-Haikou Expressway (G15), an important trunk line in the National Highway Planning. It is connected to Hangzhou-Ningbo Expressway from Shangyu Guzhu Interchange in the north, and to Wudai Village, Zhudai Town, Sanmen County in the South, and Yongtaiwen Expressway. It passes through Shangyu District, Shengzhou City, Xinchang County, Tiantai County and Sanmen County, intercommunicates with Shaozhu Expressway and Yongjin Expressway, runs through the central and eastern part of Zhejiang Province, and is the main artery connecting Shaoxing City and Taizhou City.

The total investment of the Project Highway was RMB4.626 billion. It was designed for as a dual-two lane expressway in closed system with interchanges, with designed speed of 80-120 km/h. The Project Highway began construction in 1998, and was opened to traffic on 26th December 2000 with a concession period of 30 years. The Project Highway has a distance of 141.391 km and includes 13 toll stations named Donggan, Dongguanfu, Haoba, Shangpu, Zhangzhen, Sanjie, Shengzhou, Xinchang, Xinchangnan, Shuangcai, Baihe, Tiantai and Yangtou, and Shengzhou service area, Xinchang service area and rooftop service area. The location of the Project Highway is shown in Figure 1-1.

Figure 1-1 Location of the Project Highway



Source: Consultant, 2022

1.2 Study Approach

Based on careful analysis on the characteristics of the project, the Consultant completed the tasks through different stages of works such as data collection, base year traffic characteristics analysis, development of traffic model, socio-economic assessments, and traffic & toll revenue forecasting. The overall study approach consists of the following tasks.

Step 1: Mobilization and Data Collection — It involved the collection of all available data and information of the Project Highway, the socio-economic and the transportation data of the Zhejiang Province, the Hangzhou City, the Shaoxing City and the Taizhou City. These informations included future goals regarding economic and transport developments in the study area.

Step 2: Site Reconnaissance and Necessary Traffic Survey — The Consultant carried out detailed site reconnaissance of the Project Highway alignment in order to apprehend the existing traffic conditions of the corridor, including the types of vehicles, and economic and development activities along the Project Highway corridor. The Consultant also collected relevant traffic related information such as existing traffic surveys on all relevant roads within the Project influenced area in order to understand current traffic activities in the area and along the study corridor, the current Project Highway operational conditions, travel speed assessments and operation levels of service.

Step 3: Base Year Traffic Condition Analysis — Using the data and information obtained, the Consultant established and evaluated the traffic conditions along the Project Highway. Based on the analysis of the collected traffic data on the Project Highway, the Consultant estimated the 2021 annual average daily traffic (AADT) volume of the Project Highway. Values of time and operating costs were also estimated in this stage.

Step 4: Transport Network Development — This step was to create a computer simulation model to replicate the current traffic conditions along the Project Highway. The EMME/3 traffic model system was used to establish the road network and the subsequent adjustments and evaluations. Steps 1 to 3 provided basic data to develop a transport model for this Study. The remaining tasks were to design a transport assignment model to conduct typical toll road traffic diversion and assignment tasks. The calibrated model should generate traffic flows and conditions that would be similar to the actual traffic conditions. In the Study, the assignments of future traffic flows were adjusted according to the results in Step 5.

Step 5: Socio-economic Assessments — Socio-economic assessments of the Zhejiang Province and adjacent cities were other important elements of the Study. The Consultant conducted analysis and assessments on the latest and available government data. The purpose was to find the relationship between socio-economic statistics and historical traffic flows. The more and detailed data are available, the more reliable relationship function could be established.

Step 6: Traffic and Toll Revenue Analysis — When future year network assumptions, socio-economic conditions, economic development, inflations and toll strategies were finalized and verified, detailed traffic and toll revenue analyses could be conducted. The consensus of the assumptions listed above would be regarded as the main model assumptions.

1.3 Basis of Traffic Forecasts

The Consultant received the station-to-station traffic data of the Project Highway from the ShangSan Expressway Co., Ltd. from 1st to 7th of December 2019 and from 5th to 11th of September 2021. These data included each entry and exit vehicles on the Project Highway, including its entry time and station, exit time and station, vehicle type, toll charge and gross weight (truck). These data represented the latest traffic situations in a normal week and would enable the Consultant to understand the traffic composition, the origins and destinations and the average travelled distances of the vehicles.

The advantages of using flow data from surveys to derive traffic distribution on the highway, are:

- The information was recorded by electronic equipment instead of field survey, which eliminated the disturbance to normal traffic operation;
- The information was extracted directly from the expressway's toll clearing system which could avoid manual input error such as OD recording and coding errors. It enhanced data accuracy;
- The information was recorded at 24 hours per day (i.e. sampling rate was almost 100% except non-permit vehicles);
- It eliminated the problems associated with survey sampling discrepancies and manual collection mistakes would be eliminated.

Besides the station-to-station traffic data on the Project Highway, the Consultant also collected the following data from the ShangSan Expressway Co. Ltd. in order to analyze the historical traffic variations of the Project Highway.

1. The highway mileage and number of lanes on road sections;
2. Toll charging scheme, the recent changes in charging policies and traffic management measures on the Project Highway;
3. From January 2017 to April 2022, monthly traffic volumes by vehicle types at 13 toll stations on the Project Highway;
4. From January 2017 to April 2022, monthly traffic volumes by road sections, vehicle types and directions on the Project Highway;
5. From January 2017 to April 2022, monthly toll incomes after clearance on the Project Highway.

Although OD survey was not carried out in this study due to time and other constraints, the station-to-station traffic data of the Project Highway can be adopted as a reliable data source to accurately reflect the traffic patterns. The elasticity ratios were also developed based on the historical traffic volumes on the Project Highway and the related economic growth patterns in the study area. The traffic and revenue forecasting results from this model could be regarded as reliable.

1.4 Report Structure

This report presents the final forecasting results of traffic volumes and toll revenues on the Project Highway. The report structure is presented as follows. Chapter 1 is the introduction of the Project Highway. Chapter 2 describes the details of the economic and traffic development of the regions along the project corridor. Chapter 3 discusses the development of the transport forecasting model. Chapter 4 summarizes the results of traffic volume and toll revenue forecasts on the Project Highway.

2 EXISTING CONDITION OF PROJECT HIGHWAY AFFECTED AREA

2.1 Existing Development Region along Project Highway

2.1.1 Socio-economic Development in Zhejiang Province

Zhejiang Province is located in the southern part of Yangtze River Delta of the southeast coast of China. It is bounded by East China Sea to the east, Fujian Province to the south, Jiangxi and Anhui Province to the west, and Shanghai and Jiangsu Province to the north. Zhejiang Province is one of the greatest economic development vitalities in China. Since the economic reform and market opening up, people in Zhejiang Province have been working hard to seize opportunities, deepen reform, expand opening up, and promote the development of the “Economic Province”. The overall strength of Zhejiang Province has increased dramatically. The main socio-economic data of Zhejiang Province were shown on Tables 2-1 to 2-5.

Population in Zhejiang Province

Table 2-1 Historical Permanent Resident Population in Zhejiang Province

Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Permanent Population (10,000)	5,685	5,784	5,890	5,985	6,072	6,170	6,273	6,375	6,468	6,540

Source: Zhejiang Province Statistical Yearbook 2021, Zhejiang Province Social and Economic Development Statistical Bulletin, 2021

*Gross Domestic Product (GDP) in Zhejiang Province***Table 2-2 Historical GDP in Zhejiang Province**

Year	GDP (RMB100 million)	Growth	Primary industry	Secondary industry	Tertiary industry	GDP Per Capital (RMB)
2012	34,382.39	8.1%	1,610.81	17,040.53	15,731.05	61,097
2013	37,334.64	8.3%	1,718.74	18,162.78	17,453.12	65,105
2014	40,023.48	7.7%	1,726.57	19,580.72	18,716.19	68,569
2015	43,507.72	8.0%	1,771.36	20,606.55	21,129.81	73,276
2016	47,254.04	7.5%	1,890.43	21,571.25	23,792.36	78,384
2017	52,403.13	7.8%	1,933.92	23,246.72	27,222.48	85,612
2018	58,002.84	7.1%	1,975.89	25,308.13	30,718.83	93,230
2019	62,462.00	6.8%	2,086.70	26,299.51	34,075.77	98,770
2020	64,613.34	3.6%	2,169.23	26,412.95	36,031.16	100,620
2021	73,516.00	8.5%	2,209.00	31,189.00	40,118.00	113,032

Source: Zhejiang Province Statistical Yearbook 2021, Zhejiang Province Social and Economic Development Statistical Bulletin, 2021

*Car Ownership in Zhejiang Province***Table 2-3 Historical Car Ownership in Zhejiang Province (Unit: Vehicle)**

Year	Passenger Car	Truck	Others	Total Vehicles
2012	6,640,840	1,050,189	58,060	7,749,089
2013	7,850,003	1,123,643	59,398	9,033,044
2014	8,959,921	1,115,620	56,595	10,132,136
2015	10,124,578	1,039,966	51,739	11,216,283
2016	11,403,051	1,128,714	51,693	12,583,458
2017	12,668,371	1,245,274	52,845	13,966,490
2018	13,913,234	1,367,849	56,193	15,337,276
2019	15,083,021	1,474,716	62,160	16,619,897
2020	16,059,633	1,614,079	66,716	17,740,428

Source: Zhejiang Province Statistical Yearbook (2013-2021)

Note: The vehicle ownership of Zhejiang Province in 2021 was not released.

*Passenger and Freight Traffic in Zhejiang Province***Table 2-4 Passenger and Freight Traffic in Zhejiang Province**

Year	Passengers (10,000)	Passenger Turnover (100 million passenger-km)	Cargo Volume (10,000 tons)	Cargo Turnover (100 million ton-km)
2012	220,517	921.18	113,393	1,525.59
2013	121,185	582.99	107,186	1,322.13
2014	112,915	558.06	117,070	1,419.43
2015	92,304	544.76	122,547	1,513.92
2016	83,033	465.12	133,999	1,626.78
2017	80,099	431.56	151,920	1,821.21
2018	72,013	402.80	166,533	1,964.10
2019	72,799	378.39	177,683	2,082.11
2020	38,861	204.84	189,583	2,209.95
2021	–	177.00	–	2,637.00

Source: Zhejiang Province Statistical Yearbook 2021, Zhejiang Province Social and Economic Development Statistical Bulletin, 2021

Note: New statistical method was adopted since 2013

*Port Cargo Throughput in Zhejiang Province***Table 2-5 Historical Port Cargo Throughput in Zhejiang Province**

Year	Coastal Port (10,000 tons)	Inland Port (10,000 tons)	Container Throughput (10,000 standard units)
2012	92,760	39,171	1,709.08
2013	100,591	37,459	1,852.09
2014	108,177	30,894	2,061.41
2015	109,930	28,206	2,176.76
2016	114,202	26,664	2,276.04
2017	125,744	33,088	2,460.32
2018	133,534	35,676	2,635.00
2019	135,364	39,681	2,753.00
2020	141,447	44,009	2,872.00
2021	149,000	44,000	3,108.00

Source: Zhejiang Province Statistical Yearbook 2021, Zhejiang Province Social and Economic Development Statistical Bulletin, 2021

Note: Container throughput is based on the total container throughput of Ningbo-Zhoushan Port, Wenzhou Port, Taizhou Port and Jiaxing Port

2.1.2 Socio-economic Development in Hangzhou City

Hangzhou City is located on the southeast coast of China, at the northern part of Zhejiang Province, along the northern bank of the lower reaches of the Qiantang River, and at the southern end of the Beijing-Hangzhou Grand Canal. It is also the provincial capital of the Zhejiang Province. It occupies an area of 16,596 square kilometers. Hangzhou is a pivotal city for national communications, e-commerce, e-government and digital TV applications, as well as a national software and an integrated circuit design base. Hangzhou City is committed to build a “Binjiang Paradise Silicon Valley”. The high-tech industry, led by information on new medicine, environmental protection and green materials, has generated a good momentum for future development of Hangzhou City. The main social-economic data of Hangzhou City were shown in Tables 2-6 to 2-9.

Population in Hangzhou City

Table 2-6 Historical Permanent Population in Hangzhou City

Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Permanent Population (10,000)	880.2	884.4	889.2	901.8	918.8	946.8	980.6	1,036.0	1,196.5	1,220.4

Source: Zhejiang Province Statistical Yearbook (2013-2021), Hangzhou City Social and Economic Development Statistical Bulletin (2021)

Gross Domestic Product (GDP) in Hangzhou City

Table 2-7 Historical GDP in Hangzhou City

Year	GDP (RMB100 million)	Growth	Primary industry	Secondary Industry	Tertiary industry	GDP Per Capital (RMB)
2012	7,968.58	9.0%	249.44	3,553.18	4,165.95	89,323
2013	8,639.91	8.0%	254.74	3,649.62	4,735.54	95,190
2014	9,502.21	8.2%	266.62	3,953.53	5,282.07	95,313
2015	10,495.28	10.2%	278.98	4,133.92	6,082.38	102,318
2016	11,709.45	9.7%	293.63	4,226.87	7,188.96	111,572
2017	13,160.72	8.2%	299.96	4,453.44	8,407.32	122,249
2018	14,306.72	6.7%	305.56	4,694.06	9,307.10	129,035
2019	15,418.80	6.8%	325.72	4,838.08	10,255.00	134,856
2020	16,105.83	3.9%	326.22	4,820.54	10,959.07	136,617
2021	18,109.00	8.5%	333.00	5,489.00	12,287.00	149,857

Source: Hangzhou City Statistical Yearbook (2021), Hangzhou City Social and Economic Development Statistical Bulletin (2021)

*Car Ownership in Hangzhou City***Table 2-8 Historical Car Ownership in Hangzhou City (Unit: Vehicle)**

Year	Passenger Car	Trucks	Others	Total Vehicles
2012	1,570,099	179,399	11,503	1,761,001
2013	1,860,794	173,227	11,597	2,045,618
2014	1,992,112	180,475	11,413	2,184,000
2015	2,056,143	177,674	10,950	2,244,767
2016	2,127,393	202,775	11,368	2,341,536
2017	2,210,376	229,038	11,812	2,451,226
2018	2,310,070	248,614	12,546	2,571,230
2019	2,399,022	259,746	13,039	2,671,807
2020	2,497,100	302,251	14,225	2,813,576

Source: Hangzhou City Statistical Yearbook (2013-2021)

Note: The vehicle ownership of Hangzhou City in 2021 was not released.

*Passenger and Freight Traffic in Hangzhou City***Table 2-9 Passenger and Freight Traffic in Hangzhou City**

Year	Passengers (10,000)	Passenger Turnover (10,000 passenger-km)	Cargo Volume (10,000 tons)	Cargo Turnover (10,000 ton-km)
2012	31,126	1,590,435	23,243	2,643,428
2013	30,994	1,566,046	23,884	2,719,204
2014	17,431	1,143,750	23,202	2,760,873
2015	16,591	1,078,054	23,800	3,003,728
2016	12,282	936,574	25,194	3,217,983
2017	13,019	897,116	29,378	3,615,581
2018	10,027	821,267	30,593	3,875,561
2019	9,360	689,970	31,732	3,928,822
2020	4,535	381,790	34,837	4,599,433
2021	5,042	—	38,804	—

Source: Hangzhou City Statistical Yearbook (2013-2021)

Note: New statistical method was adopted since 2014

2.1.3 Socio-economic Development in Shaoxing City

Shaoxing City is located in the southeast coast of China. It is bounded by Ningbo City to the east, Hangzhou City to the west. Shaoxing City is 232 kilometers away from Shanghai City and occupies an area of 8,256 square kilometers. It owns the jurisdiction of the countys and districts of Yuecheng, Keqiao, Shangyu, Zhuji, Shengzhou and Xinchang. It has a permanent resident population of 5.337 million and gross domestic product (GDP) of RMB679.5 billion. The main social and economic data of Shaoxing City were shown in Table 2-10, Table 2-11, Table 2-12 and Table 2-13.

Population in Shaoxing City

Table 2-10 Historical Permanent Population in Shaoxing City

Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Permanent Population (10,000)	494.3	494.9	495.6	496.8	498.8	501.0	522.3	526.0	529.1	533.7

Source: Shaoxing City Statistical Yearbook (2013-2021), Shaoxing City Social and Economic Development Statistical Bulletin (2021)

Gross Domestic Product (GDP) in Shaoxing City

Table 2-11 Historical GDP in Shaoxing City

Year	GDP (ten thousands RMB)	Growth	Primary Industry	Secondary Industry	Tertiary Industry	GDP Per Capital (RMB)
2012	36,775,219	9.6%	1,772,070	20,103,670	14,899,479	74,002
2013	40,108,363	8.4%	1,823,173	21,616,480	16,668,710	80,129
2014	42,351,578	7.5%	1,844,064	22,403,855	18,103,658	84,031
2015	44,246,910	7.1%	1,878,346	22,790,348	19,578,216	87,117
2016	46,971,537	5.5%	1,948,750	23,852,125	21,170,662	91,616
2017	50,274,840	7.1%	1,957,222	25,064,231	23,253,387	97,225
2018	53,827,168	7.1%	1,960,418	26,296,881	25,569,870	103,404
2019	57,855,103	7.2%	2,083,106	27,503,931	28,268,066	110,379
2020	60,006,619	3.3%	2,192,604	27,117,566	30,696,449	113,746
2021	67,950,000	8.7%	2,220,000	32,280,000	33,400,000	127,875

Source: Shaoxing City Statistical Yearbook (2021), Shaoxing City Social and Economic Development Statistical Bulletin (2021)

*Car Ownership in Shaoxing City***Table 2-12 Historical Car Ownership in Shaoxing City (Unit: Vehicle)**

Year	Passenger Car	Trucks	Others	Total Vehicles
2012	555,894	69,107	3,031	628,032
2013	659,548	77,201	3,213	739,962
2014	774,754	76,861	3,066	850,681
2015	896,990	70,952	2,892	970,834
2016	1,021,947	78,220	2,741	1,132,908
2017	1,149,040	87,920	3,055	1,240,014
2018	1,284,039	98,263	3,272	1,385,574
2019	1,422,345	107,742	3,634	1,533,721
2020	1,489,316	117,804	4,340	1,743,334
2021	—	—	—	1,817,000

Source: Shaoxing City Statistical Yearbook (2013-2021)

*Passenger and Freight Traffic in Shaoxing City***Table 2-13 Passenger and Freight Traffic in Shaoxing City**

Year	Passengers (10,000)	Passenger Turnover (10,000 passenger-km)	Cargo Volume (10,000 tons)	Cargo Turnover (10,000 ton-km)
2012	17,414	479,693	8,051	819,204
2013	17,441	495,573	8,560	877,218
2014	9,721	368,086	10,091	818,443
2015	9,899	343,888	10,866	880,876
2016	2,957	307,914	11,134	878,421
2017	2,805	294,639	12,055	914,886
2018	2,798	298,044	12,596	951,264
2019	2,001	291,021	13,615	1,112,447
2020	1,023	148,393	16,053	1,305,130
2021	760	86,300	17,800	1,457,800

Source: Shaoxing City Statistical Yearbook (2021)

Note: New statistical method was adopted in 2014 and 2016

2.1.4 Socio-economic Development in Taizhou City

Taizhou City is located in the southeast coast of China. It is bounded by East China Sea to the east, Wenzhou City to the south, Lishui City and Jinhua City to the west, and Shaoxing City and Ningbo City to north. Taizhou City occupies land area of 9,411 square kilometers and territorial sea and internal water area of about 6,910 square kilometers. It owns the jurisdiction of the counties and districts of Jiaojiang, Huangyan, Luqiao, Linhai, Wenling, Yuhuan, Tiantai, Xianju and Sanmen. It has a permanent resident population of 6.661 million and gross domestic product (GDP) of RMB578.619 billion. The main social and economic data of Taizhou City were shown in Table 2-14, Table 2-15, Table 2-16 and Table 2-17.

Population in Taizhou City

Table 2-14 Historical Permanent Population in Taizhou City

Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Permanent Population (10,000)	600.5	603.8	601.5	604.9	608.0	611.8	648.8	654.8	662.7	666.1

Source: Taizhou City Statistical Yearbook (2021), Taizhou City Social and Economic Development Statistical Bulletin (2021)

Gross Domestic Product (GDP) in Taizhou City

Table 2-15 Historical GDP in Taizhou City

Year	GDP (100 million RMB)	Growth	Primary Industry	Secondary Industry	Tertiary Industry	GDP Per Capital (RMB)
2012	2,944.22	7.22%	195.70	1,457.21	1,291.31	48,480
2013	3,192.67	7.96%	205.21	1,550.89	1,436.57	51,943
2014	3,410.16	7.38%	208.47	1,648.97	1,552.73	54,923
2015	3,571.47	6.34%	221.34	1,650.58	1,699.55	56,880
2016	3,874.87	7.60%	243.79	1,748.84	1,882.25	61,050
2017	4,386.04	8.03%	255.90	2,019.90	2,110.23	68,510
2018	4,880.32	7.53%	268.47	2,267.74	2,344.11	75,570
2019	5,102.17	4.95%	283.06	2,299.93	2,519.18	78,278
2020	5,262.72	3.38%	294.78	2,298.21	2,669.73	79,889
2021	5,786.19	8.30%	303.94	2,543.01	2,939.24	86,867

Source: Taizhou City Statistical Yearbook (2021), Taizhou City Social and Economic Development Statistical Bulletin (2021)

*Car Ownership in Taizhou City***Table 2-16 Historical Car Ownership in Taizhou City (Unit: Vehicle)**

Year	Passenger Car	Trucks	Others	Total Vehicles
2012	623,700	165,915	3,658	793,273
2013	738,660	179,521	3,880	922,061
2014	862,643	173,361	3,518	1,039,522
2015	996,106	161,221	3,431	1,160,758
2016	1,153,475	171,146	3,218	1,327,839
2017	1,294,940	184,644	3,383	1,482,967
2018	1,424,418	201,201	3,705	1,629,324
2019	1,534,736	213,341	4,105	1,752,182
2020	1,635,938	229,032	4,435	1,869,405
2021	—	—	—	198.92

Source: Taizhou City Statistical Yearbook (2021), Taizhou City Social and Economic Development Statistical Bulletin (2021)

*Passenger and Freight Traffic in Taizhou City***Table 2-17 Passenger and Freight Traffic in Taizhou City**

Year	Passengers (10,000)	Passenger Turnover (10,000 passenger-km)	Cargo Volume (10,000 tons)	Cargo Turnover (10,000 ton-km)
2012	30,210	925,562	11,744	1,688,270
2013	14,423	558,711	9,040	1,486,510
2014	12,931	536,282	9,628	1,577,113
2015	11,177	512,420	9,990	1,661,631
2016	9,895	426,965	11,658	1,810,187
2017	8,236	356,230	14,377	2,197,246
2018	6,992	298,782	15,393	2,330,935
2019	8,314	290,830	16,330	2,444,729
2020	5,570	178,618	15,372	1,967,192

Source: Taizhou City Statistical Yearbook (2021)

Note: New statistical method was adopted since 2013. The passenger and freight traffic of Taizhou City in 2021 was not released.

2.2 Historical Traffic and Toll Revenue Analysis on Project Highway

2.2.1 Historical Traffic Analysis on Project Highway

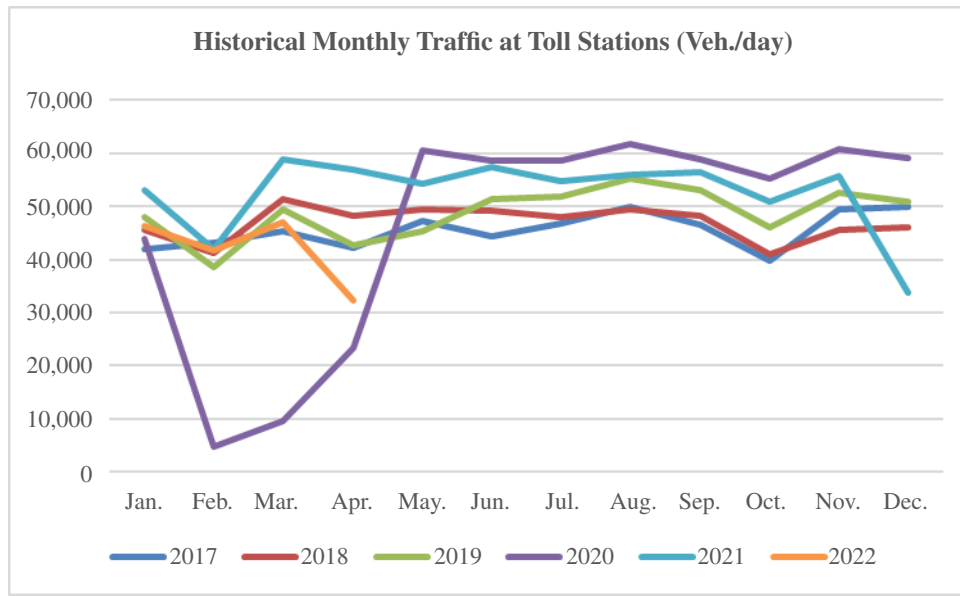
The Consultant collected the monthly traffic volume data by vehicle types (January 2017 to April 2022) from the ShangSan Expressway Co. Ltd. Through analysis, it was found that the traffic volumes on the Project Highway have the following characteristics in the past years:

- The ratio of passenger cars and trucks on the Project Highway is about 59:41. The ratio of passenger cars Class 1, truck Class 6, truck Class 1 and truck Class 2 is about 56.7%, 17.7%, 8.2% and 5.8% respectively. The four types of vehicles account for 88.4% of the total.
- Starting from 2017, the entry and exit traffic volume at the 13 toll stations of the Project Highway has grown more slowly, with a compound annual growth rate of 3.6% from 2017 to 2021, compared with 1.56% growth in section traffic volume. This shows that in the past five years, the Project Highway has been affected by the surrounding roads, long-distance cross-regional traffic and short-distance intra-regional traffic have been affected.
- The growth of passenger cars and trucks is inconsistent. From 2017 to 2021, the compound annual growth of passenger cars and trucks is -0.47% and 4.85% respectively. The growth of trucks was faster than that of passenger cars. It indicated that the surrounding roads had a greater impact on passenger cars.
- In the past five years, the traffic volume grew by only 2.7% in 2018 as a result of the cancellation of toll station on the Xinchang County section of the National Highway G104 and the closing construction of the YongTaiWen Expressway. The traffic volume grew by only 0.4% in 2019 as a result of the Maoliling tunnel accident and the closing construction of the YongTaiWen Expressway. It began to be affected by the epidemic in 2020, with free to all vehicles from 17 February to 5 May during the epidemic, and was later affected by the aftermath of the epidemic and the rebound after the epidemic, the traffic volume increased by 13.7% in 2020(only from May 6 to December 31,2020). There were epidemic outbreaks in some localities in 2021, and some sections of the HangShaoTai Expressway were opened, the traffic volume decreased by -9.3% that year. Between January and April 2022, the Shanghai epidemic caused severe restrictions on the movement passenger cars and trucks, with traffic volume decreasing by -20.2% compared with the same period in 2021.

The traffic growth pattern at the 13 toll stations on the Project Highway in the past years were shown in Figure 2-1.

Historical Monthly Traffic at Toll Stations

Figure 2-1 Historical Monthly Traffic at Toll Stations



Source: ShangSan Expressway Co. Ltd, 2022

Note: The Project Highway was free to all vehicles between 17 February and 5 May as for the COVID-19 and many vehicles on the Project Highway were not counted.

Table 2-18 Historical Monthly Traffic at Toll Stations of the Project Highway

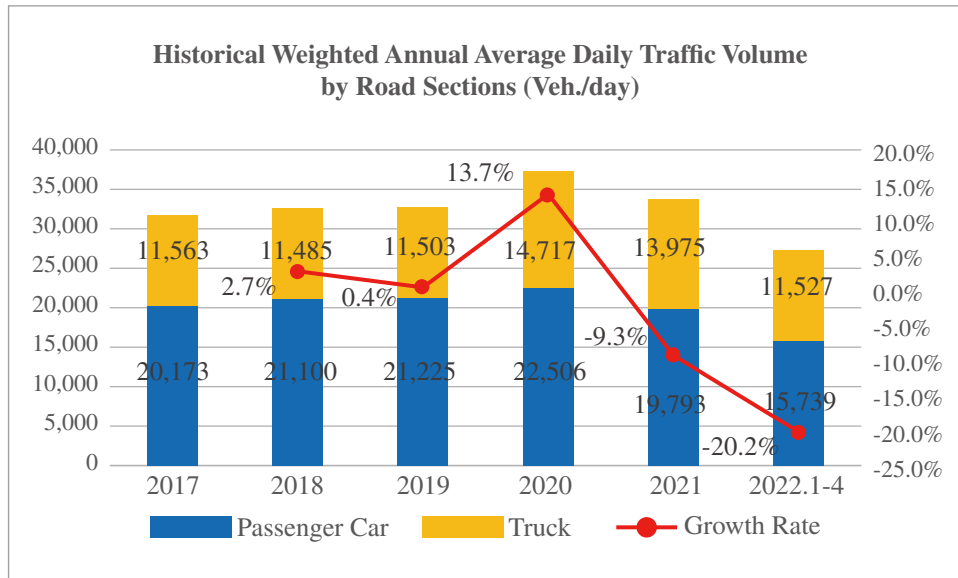
Month / Year	2017	2018	2019	2020	2021	2022
Jan.	42,024	45,468	48,082	43,916	52,958	46,364
Feb.	43,095	41,283	38,566	4,742	41,854	41,671
Mar.	45,310	51,265	49,350	9,503	58,916	46,975
Apr.	42,266	48,290	42,585	23,356	56,907	32,256
May.	47,174	49,487	45,261	60,527	54,201	
Jun.	44,378	49,136	51,374	58,567	57,261	
Jul.	46,813	48,025	51,799	58,560	54,653	
Aug.	49,952	49,397	55,294	61,608	55,975	
Sep.	46,643	48,103	53,101	58,794	56,308	
Oct.	39,723	40,859	46,066	55,294	50,768	
Nov.	49,510	45,626	52,593	60,703	55,748	
Dec.	49,983	45,991	50,979	59,006	33,850	
Daily Average	45,592	46,947	48,825	46,396	52,492	41,900

Source: ShangSan Expressway Co. Ltd, 2022

Historical Traffic Volume by Section

According to the traffic data collected from the ShangSan Expressway Co. Ltd., the weighted annual average daily traffic volumes by road sections on the Project Highway from January 2017 to April 2022 were shown in Figure 2-2.

Figure 2-2 Historical Weighted Annual Average Daily Traffic Volume by Road Sections



Source: ShangSan Expressway Co. Ltd, 2022

Note: Since free travel during the epidemic in 2020, so the data between May 6 and December 31 2020 was be calculated to compare. The growth rate of traffic volume of January to April 2022 is obtained by comparing contemporaneous traffic volume of 2021.

Table 2-19 Historical Weighted Annual Average Daily Traffic Volume by Sections (Veh./day)

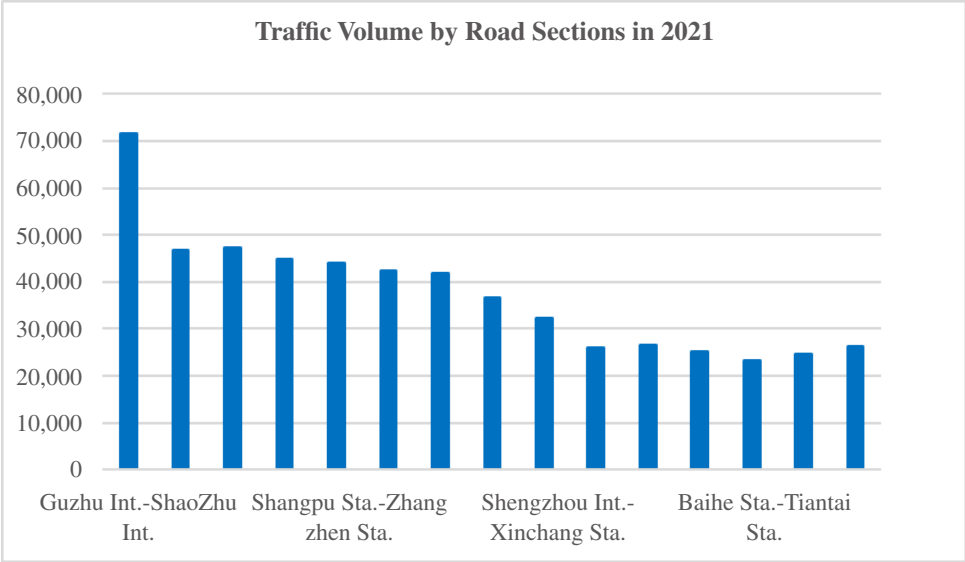
Year	PC1	PC2	PC3	PC4	T1	T2	T3	T4	T5	T6	T7	Total
2017	18,735	230	728	480	2,179	1,163	1,555	719	5,764	26	156	31,736
2018	19,830	224	595	451	2,171	1,118	1,429	732	5,876	20	139	32,585
2019	20,064	222	523	415	2,161	928	1,271	756	6,231	18	139	32,728
2020	21,655	149	417	285	2,851	1,857	1,662	1,603	654	6,090	0	37,223
2021	19,161	83	331	218	2,767	1,942	1,056	1,528	714	5,968	0	33,768
2022.1-4	15,438	45	133	123	2,309	1,667	715	1,240	608	4,988	0	27,266

Source: ShangSan Expressway Co. Ltd, 2022

Base Year Section Traffic Volumes and Vehicle Composition

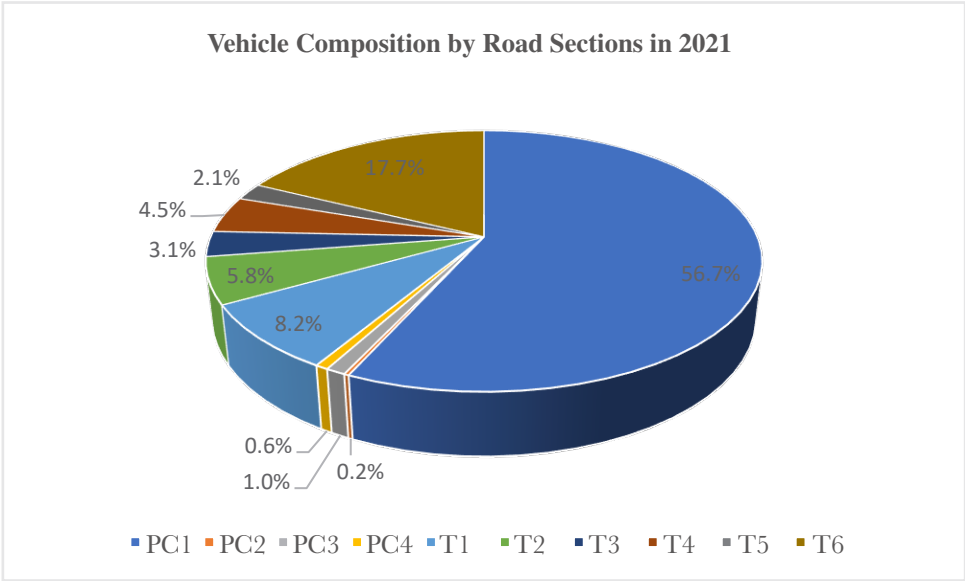
According to traffic data provided by the ShangSan Expressway Co. Ltd, the section traffic volumes in 2021 and the vehicle composition of weighted average traffic volumes were shown in Figure 2-3 and Figure 2-4 respectively. According to the distribution of traffic volumes on the Project Highway, the closer to Shaoxing City, the higher the traffic volumes were recorded. According to the vehicle composition, the top four categories were Passenger Car – Class 1, Truck – Class 6, Truck – Class 1 and Truck – Class 2. From 2017 to 2021, the proportion of trucks remained about 35%. After 2020, due to policy adjustments such as the abolition of weight-based charges. weighing in entries of toll stations, container vehicles preferential policy and ETC trucks 85 discount preferential policy, the proportion of trucks has increased to 41% and kept stably.

Figure 2-3 Traffic Volume by Road Sections in 2021



Source: ShangSan Expressway Co. Ltd, 2022

Figure 2-4 Vehicle Composition of Traffic by Road Sections in 2021



Source: ShangSan Expressway Co. Ltd, 2022

Notes: According to the Vehicle Classification of the Toll Highway, JT/T 489-2019¹, “PC1” to “PC4” refer to Passenger Car – Class 1 to Class 4 respectively, “T1” to “T6” refer to Truck – Class 1 to Class 6 respectively

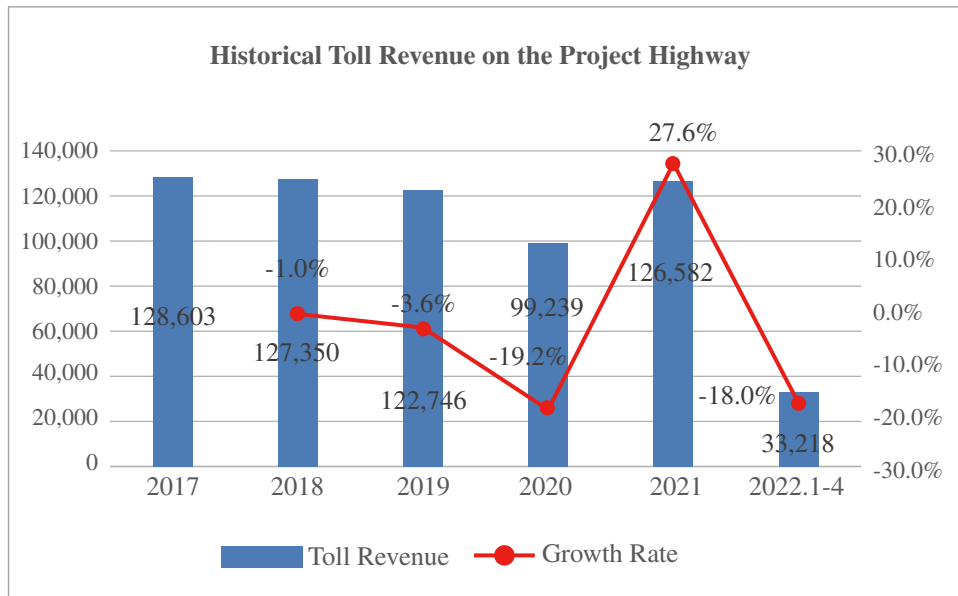
2.2.2 Historical Toll Revenues on Project Highway

Historical Toll Revenue

In the past few years, the toll revenues of the Project Highway could be divided into two stages. The toll revenues held steady while falling slightly from 2017 to 2019 (due to factors such as the cancellation of tolls and construction of surrounding roads, the Maoliling tunnel accident, etc.). Due to the popularity of ETC, the reduction of the overall ratio of trucks and the preferential tariff policies for passenger cars and trucks, the growth of the toll revenues was lower than the growth of the traffic volume. In 2020, due to the impact of the epidemic, all vehicles on the Project Highway will be free for charging for 79 days, passenger cars with less than seven seats will travel free for 16 days during the Lunar New Year, so the toll revenues in 2020 had dropped significantly. the epidemic has eased, and the toll income has increased to a large extent in 2021, with the toll revenues in that year increasing by 3.1% over 2019.

¹ The definition of toll highway vehicle classifications, JT/T 489-2019: Passenger Car 1 is a passenger car with no more than 9 seats and less than 6 meter long. Passenger Car 2 with 10 to 19 seats and less than 6 meter long. Passenger Car 3 with 20 to 39 seats and more than 6 meter long. Passenger Car 4 with no less than 40 seats and more than 6 meter long. Truck 1 is a truck with 2 axles, less than 6 meter and less than 4,500kg maximum allowable total mass. Truck 2 is a truck with 2 axles, no less than 6 meter and no less than 4500kg maximum allowable total mass. Truck 3 with 3 axles inclusive. Truck 4 with 4 axles inclusive. Truck 5 with 5 axles inclusive. Truck 6 with no less than 6 axles.

Figure 2-5 Historical Toll Revenue on the Project Highway



Source: ShangSan Expressway Co. Ltd, 2022

Note: The toll revenue were pre tax incomes. In 2020, due to the impact of the epidemic, all vehicles on the Project Highway will be free for charging for 79 days, passenger cars with less than seven seats will travel free for 16 days during the Lunar New Year, so the toll revenues in 2020 had dropped significantly.

The growth rate of toll revenues of January to April 2022 is obtained by comparing contemporaneous toll revenues of 2021.

Proportion of ETC Vehicles by Vehicle Types

Based on the two-weeks traffic data collected on the Project Highway, The Consultant has summarized its ETC ratios for each type as shown in the table below, which shows that the ETC ratios are higher for large vehicles than for small ones and higher for trucks than for passenger cars.

Table 2-20 Proportion of ETC Vehicles by Vehicle Types

Type	PC1	PC2	PC3	PC4	T1	T2	T3	T4	T5	CV1	Total
ETC Percent	63.7%	75.6%	95.8%	93.1%	50.7%	68.7%	75.2%	79.2%	96.2%	90.8%	69.1%

Source: Consultant, 2022

3 TRAFFIC FORECAST MODEL

This forecast study employed the four-stage model, commonly used in urban city traffic studies. Building this type of mathematical model needs a lot of data and time. Building a normal traffic forecast model for a medium or small city would need about half a year to a year. The general process of the model development is as follows:

- Trip generation: The main goal of this stage is to estimate the total trip productions of every zone based on population and trip rates, and the total attractions by the weighed employment figures;
- Trip distribution: To build O-D matrices based on the distribution functions derived from resident trip surveys or large-scale home interview surveys;
- Mode split: Calculating modal splits of trip making using binary or multinomial logit models;
- Trip Assignment: To carry out trip assignment using generalized cost.

The advantages of this kind of model is that it can accurately reflect the impacts of land use and population changes on travel needs. The limitations are usually due to insufficient modeling time and inadequate planning data, especially in China.

Considering the above-mentioned limitations and different forecasting needs, a simplified four-stage model, which is commonly used in inter-city traffic studies, was employed. The major difference is that this simplified model establishes traffic patterns and flows based on the results of traffic surveys that cover the study area and do not involve any modeling procedures or functions for the Mode Split. Traffic surveys normally include OD survey and station to station data collection.

In short, the simplified four-stage model generates trips and establishes trip distribution based on traffic surveys. It then forms several single-mode trip matrices which are used in trip assignment process using a computer road network. Because the data for trip generation and distribution were mainly derived from OD surveys or station-to-station records, detailed data verification and expansion procedures were required. Also, the verification of the computerized assignment model is another important factor for the forecasting accuracy.

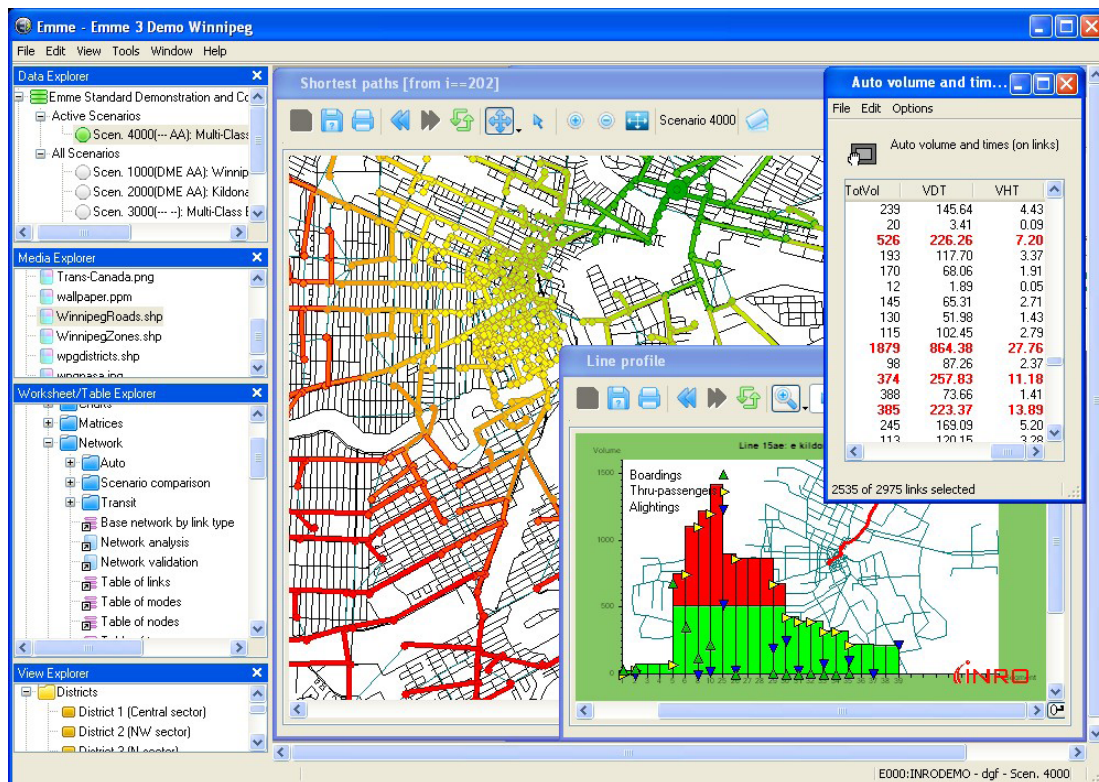
The consultant built the expressway network model for the Zhejiang Province, the Jiangsu Province and Shanghai in order to analyze future traffic needs on the Project Highway. This chapter presents a brief introduction of the traffic forecasting model.

3.1 Traffic Software – EMME/3

EMME/3 has been used to simulate traffic patterns on current road networks. As a reputable urban and regional transportation planning software, it provides a complete and flexible platform for travel demand modeling, network analysis and travel evaluation works. It was first introduced in 1976 by INRO, which was formerly known as the Transport Research Center of the Montreal University in Canada. Currently, EMME/3 is deemed to be the leading software in the transport planning industry with over 600 organizational users worldwide.

One of the reasons for the popularity of EMME/3 is that it allows the users to set up their own databases, supports quantitative analysis and carries out evaluation with preset variations. The input data includes transport infrastructures (e.g. road network), economic activities, social-economic characteristics, etc.

Figure 3-1 Model Components of EMME/3



Once the database is set up, the user can perform transport planning by utilizing the strong capabilities of the software including interactive data input, visual presentation of assignment results and precise traffic engineering calculations.

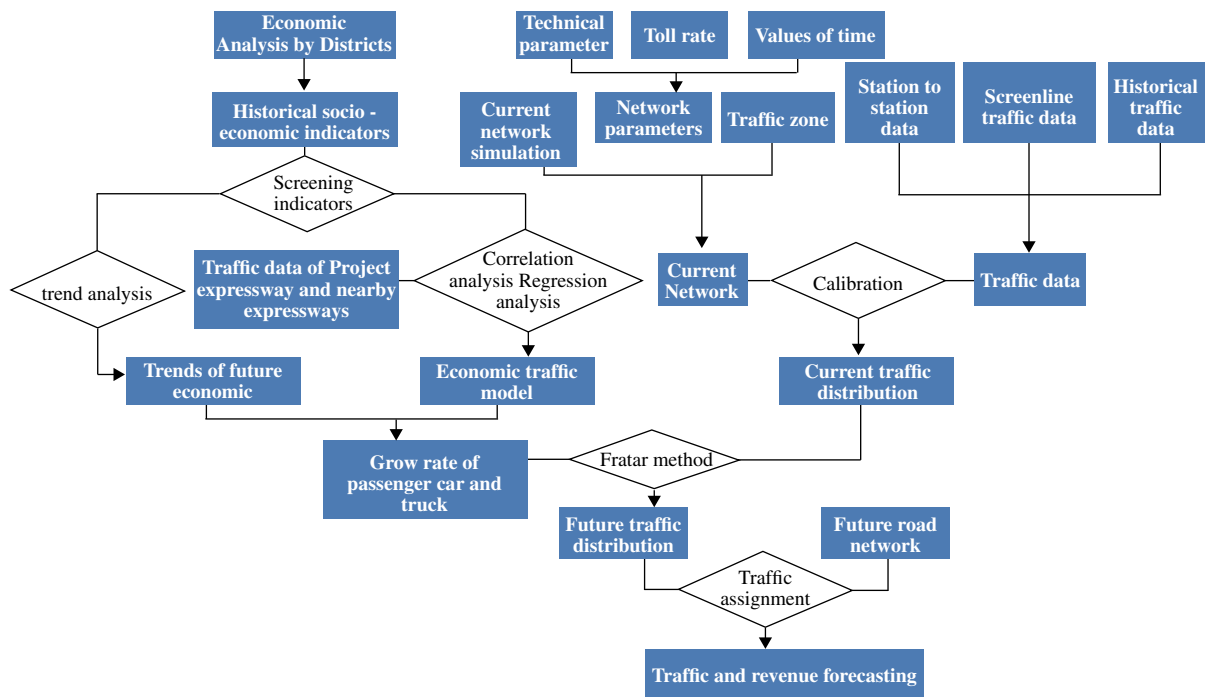
There are two main issues related to transport modeling: transport demand and transport supply. Transport supply refers to the availability of a road network. Transport demand implies the magnitude of travel (i.e. OD matrices) to be determined by the demand module, incorporated in the overall transport forecasting model. The “equilibrium” condition achieved during the modeling process means the transport demand and the transport supply are at a “balanced” state on the road facilities.

3.2 Technical Approach to Traffic Modeling

In order to accurately predict the future traffic volumes and revenue growth of the Project Highway, the Consultant established a complex socio-economic-traffic model, which can be divided into two interrelated sub-models. They are:

- Economic Analysis Model: the driving factor for determining traffic growth;
- Traffic Forecasting Model: To check and distribute traffic flows, analyze traffic diversions and inducements.

Figure 3-2 Technical Approach to Traffic Modeling



Source: Consultant, 2022

3.3 Economic-Traffic Model Analysis

3.3.1 Economic Analysis Zones

In this study, the Consultant compared a number of socio-economic drivers to establish a more comprehensive economic-traffic model. Therefore, in the economic analysis, it included the following parts:

- Selection of Socio-Economic Indicators Related to Transportation;
- Correlation Between Economic Indicators and Traffic Growths through Regression Analysis;
- Analysis of the Elasticity Coefficient of the Economic Indicators and Traffic Growth;
- Analysis of future growth trend of Economic Indicators.

In the study, it was necessary to conduct economic analysis on each of the Economic Analysis Zones (TAZ), to establish a regression model of TAZ traffic productions and the economic indicators, and to apply it to each of the TAZ. Because there were 561 TAZs, the amount of data and analysis would be extremely difficult and time consuming. Therefore, the Consultant decided to aggregate these TAZs into 16 superzones (Economic Analysis Zones), and to analyze their respective economic indicators. The Consultant collected the historical traffic volumes on the Project Highway and the nearby expressways, and established an economic-traffic prediction model between traffic demands and the economic indicators that were closely related to the Project Highway. By applying the growth trends of TAZ’s economic indicators in the economic-traffic model, the Consultant was able to predict the future traffic growth of each TAZ. The 16 Economic Analysis Zones were shown in Figure 3-3 and Table 3-1:

Figure 3-3 Economic Analysis Zones

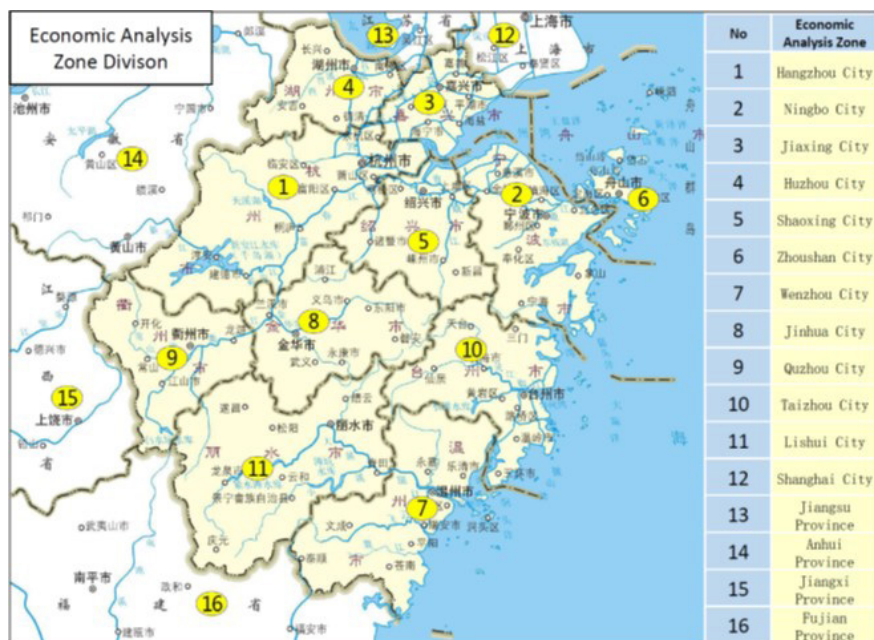


Table 3-1 Jurisdiction of Economic Analysis Zones

Superzone Zone	Name	Jurisdiction
1	Hangzhou City	Hangzhou City and its counties
2	Ningbo City	Ningbo City and its counties
3	Jiaxing City	Jiaxing City and its counties
4	Huzhou City	Huzhou City and its counties
5	Shaoxing City	Shaoxing City and its counties
6	Zhoushan City	Zhoushan City and its counties
7	Wenzhou City	Wenzhou City and its counties
8	Jinhua City	Jinhua City and its counties
9	Quzhou City	Quzhou City and its counties
10	Taizhou City	Taizhou City and its counties
11	Lishui City	Lishui City and its counties
12	Shanghai	Shanghai and its counties
13	Jiangsu Province	Jiangsu Province and northern districts
14	Anhui Province	Anhui Province and northern districts
15	Jiangxi Province	Jiangxi Province and western districts
16	Fujian Province	Fujian Province and southern districts

Source: Consultant, 2022

3.3.2 Economic Indicators Analysis

A typical economic and traffic forecasting model uses the relationship developed between historic GDP growths and traffic demands to forecast future traffic generation. In order to be more comprehensive and scientific, the Consultant also investigated other economic parameters to develop more comprehensive economic-traffic correlations.

In order to investigate the impacts of different district economic parameters on traffic growth patterns (passenger cars and trucks) by various vehicle types, the historic traffic data by vehicle types at the toll station locations and the corresponding variations in the economic parameters were closely studied. The selected economic parameters were also prioritized before they were subjected to correlation and regression analyses (note: In the selection of the indicators, attention was also paid to the difficulties of obtaining the related data in each region):

- Passenger car Classes 1 & 2 are basically small vehicles that are owned by individuals or units. The most relevant indicator for their growth in this Study was identified as: **Passenger Car Ownership**.

- Passenger car Classes 3 & 4 are basically for inter-city passenger travel or tourist trips. The most relevant indicator for their growth was: **Road Passenger Traffic Volume**.
- Truck Classes 1-6 are basically self-used or for transport of bulk cargo goods. They have more relevant relationships with economic activities, product production and transport circulation industries. The most relevant indicator for their growth was: **GDP**.

After determining the relevant economic indicators for the growth of various vehicle classes, the elasticity analysis of passenger and freight demands against economic growth was carried out. Finally, an economy-traffic growth model was developed.

$$Y_n = b \cdot (a \cdot X_1 + c)$$

Note: Dependent variable Y_n – traffic growths at different areas;

Independent variable X_1 – Historic growth pattern of socio-economic parameters in the Project Highway influenced areas;

a, c – regression coefficient;

b – correlation factor between time value and traffic volume.

Through the regression analysis, the values of various coefficients in the economic-traffic model were determined as follows:

Table 3-2 Parameters of Traffic Growth Model

Vehicle Classes ²	a	X_1	c	b
Passenger Car Classes 1 & 2	0.957	Passenger car ownership	0.028	0.90-0.95
Passenger Car Classes 3 & 4	0.304	Road passenger travel	0.013	0.90-0.95
Truck Classes 1 – 3	0.635	GDP	0.010	0.90-0.95
Truck Classes 4 – 6	0.843	GDP	0.013	0.90-0.95

Source: Consultant, 2022

Notes: According to the Vehicle Classification of the Toll Highway, JT/T 489-2019, the detail is listed in Table 3-7.

² The new vehicle classes are according to “the definition of toll highway vehicle classifications, JT/T 489-2019”, see Table 3-7.

3.3.3 Future Time Elasticity Coefficient Assumption

Based on foreign and domestic experience, the time adjustment factors of economic and traffic parameters would remain relatively stable in the coming 3-5 years. When the economy of a society is low, transportation demand would increase and hence economic growth would be more dependent on transportation services. Thus, the time adjustment factors would be relatively high. On the contrary, the time adjustment factors would diminish when the economy prospers to a certain level. The main reason for the decline is that rapid growth of high-tech industries and tertiary industries would normally go hand in hand with overall economic growth, this would likely reduce the dependence on transportation needs. This will in turn result in smaller transport demands to offset the persistent needs for transport services.

Through more than ten years of relevant working experience in mainland China, the Consultant completed traffic volume forecasting studies of many toll highways in Provinces such as Zhejiang, Northeast, Tianjin, Hebei, Jiangsu, Jiangxi, Guangdong, Sichuan, Shanghai, Anhui, etc. In particular, the Consultant has been actively involved in traffic volume and revenue forecasting works on numerous toll highways in the Zhejiang Province. From the previously completed toll highway studies, the Consultant attained data on traffic growth rates and GDP growth patterns. It can be concluded that the future time elasticity coefficient will be basically between “0.50-1.00”.

The time adjustment factors of the Project Highway for the coming years were estimated as shown in Table 3-3.

Table 3-3 Future Time Elasticity Coefficient (b)

Vehicle Types	2021-2025	2026-2030
Passenger Car Types 1 & 2	0.95	0.90
Passenger Car Types 3 & 4	0.95	0.90
Truck Types 1 – 3	0.95	0.90
Truck Types 4 – 6	0.95	0.90

Source: Consultant, 2022

3.3.4 *Future Development Trends of Economic Indicators*

In general, it is difficult to predict the future growth pattern of economic parameters. It may be unreasonable to adopt a uniform trend for all the economic parameters. Consequently, we determined the future trends of the parameters based on the following considerations:

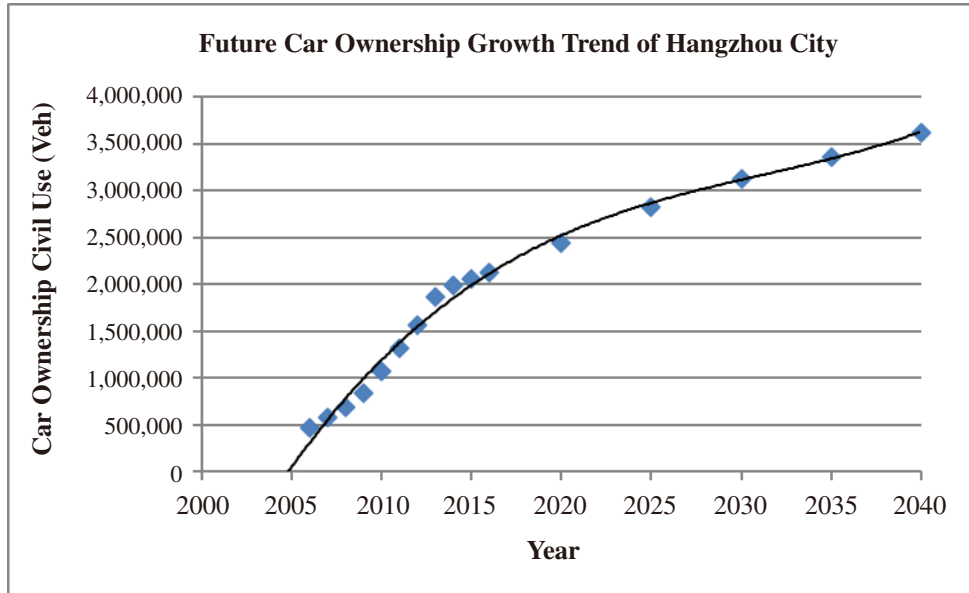
- To understand historic growth trends based on collection and assessment of historic data;
- To consult the “Fourteenth Five-Year Plan”: Referred to the goals and requirements for future growth in the Plan;
- To consult urban City Master Plans: Referred to the goals and requirements for future growth in relevant Master Plans;
- To compare experience on international and domestic urban city development processes around the world. Studied the changes in the economic parameter values for various phases of successful cities in developing countries.
- To investigate current and future planning guidelines of other industries.

Future Trends of Selected Economic Indicators Analysis

The future growth trends of the selected economic indicators of each TAZ are mainly based on the economic development goals and objectives of the 14th Five-Year Plan. The future economic development trends are expected to reflect the control points of the economic growth patterns, the development policies and the overall growth of the indicators in the next five years.

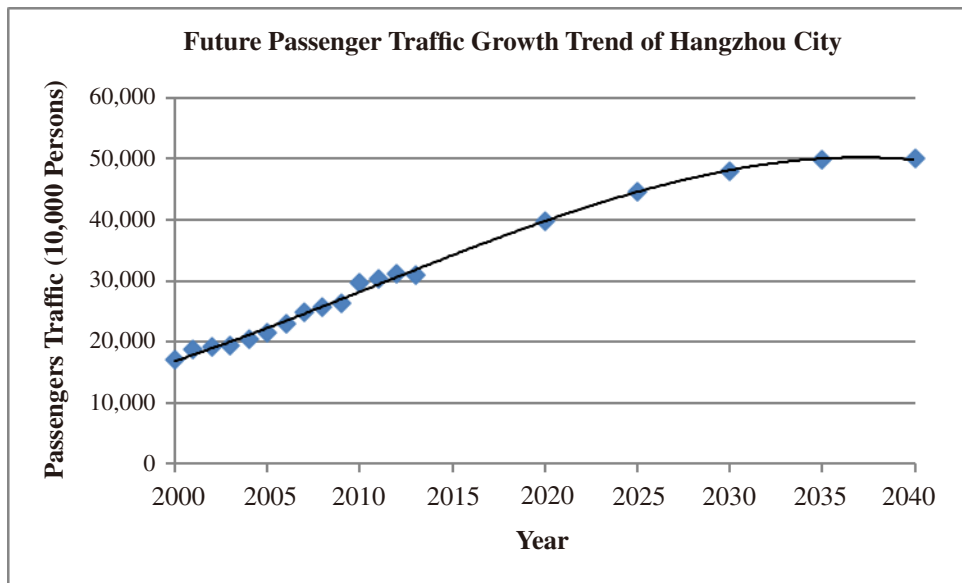
The understanding of the historic development, the future development patterns of each TAZ based on the “14th Five-Year Plan”, and the development guidelines of local Master Plans would enable the Consultant to predict the annual average growth rates of the GDP. In the Zhejiang Province for the next 5 years, the GDP growth is expected to be between 5%-7%. A more stable future economic development trend will likely replace the more aggressive growth in the past. Figures 3-4 to 3-6 presented the economic indicators of Hangzhou respectively. The economic analysis of other TAZs was quite similar. In the future forecasting of economic growth trends, the Consultant also considered the various domestic growth development patterns of individual TAZs in recent years.

Figure 3-4 Future Car Ownership Growth Trend of Hangzhou City



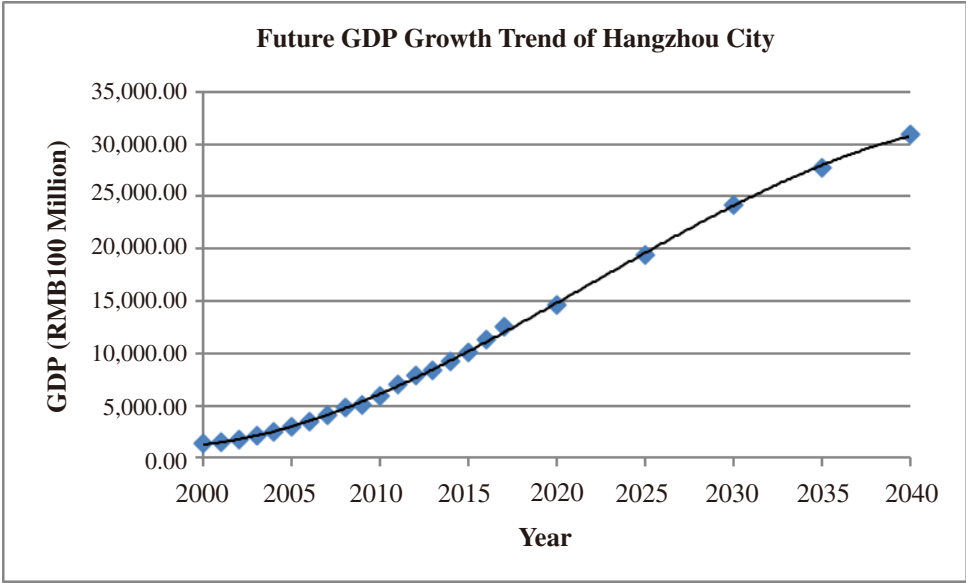
Source: Consultant, 2022

Figure 3-5 Future Passenger Traffic Growth Trend of Hangzhou City



Source: Consultant, 2022

Figure 3-6 Future GDP Growth Trend of Hangzhou City



Source: Consultant, 2022

Based on the above various planning and referencing exercises, the Consultant was able to determine the control values of future growth trends of the economic indicators. Combining with the results of the regression analysis (trending curve), the future growth trends of the economic indicators of the 16 TAZs were determined and summarized in Tables 3-4 to 3-6. Applying these growth patterns to the previously developed economic-traffic model, the future annual traffic growth rates for each corresponding TAZ were calculated.

Table 3-4 Future Assumptions of Passenger Car Ownership for Civil Use by TAZs

TAZ	2021-2025	2025-2030
Hangzhou City	4.0%	3.0%
Ningbo City	4.0%	3.0%
Jiaxing City	5.5%	4.0%
Huzhou City	5.5%	4.0%
Shaoxing City	5.5%	4.0%
Shaoshan City	5.5%	4.0%
Wenzhou City	5.5%	4.0%
Jinhua City	5.5%	4.0%
Quzhou City	8.0%	6.0%
Taizhou City	5.5%	4.0%
Lishui City	5.5%	4.0%
Shanghai City	5.5%	4.0%
Jiansu Province	5.5%	4.0%
Anhui Province	8.0%	6.0%
Jianxi Province	8.0%	6.0%
Fujian Province	8.0%	6.0%

Source: Consultant, 2022

Note: With reference to the observation at more developed cities over the world, the average passenger car ownership per capita would seldom exceed 0.4 vehicles/person. Therefore, it was assumed that the growth will be constrained when it reached 0.3 vehicles/person, and the maximum would not exceed 0.4 vehicles/person by the end of the forecast period

Table 3-5 Future Road Passenger Travel Growth Assumptions in TAZs

TAZ	2021-2025	2025-2030
Hangzhou City	2.0%	1.0%
Ningbo City	6.0%	3.0%
Jiaxing City	2.0%	1.0%
Huzhou City	0.0%	0.0%
Shaoxing City	0.0%	0.0%
Shaoshan City	2.0%	1.0%
Wenzhou City	3.0%	2.0%
Jinhua City	3.0%	2.0%
Quzhou City	4.0%	2.5%
Taizhou City	3.0%	2.0%
Lishui City	0.0%	0.0%
Shanghai City	2.0%	1.0%
Jiansu Province	0.0%	0.0%
Anhui Province	1.0%	0.0%
Jianxi Province	3.0%	2.0%
Fujian Province	3.5%	2.5%

Source: Consultant, 2022

Table 3-6 Future GDP Growth Rate Assumptions in TAZs

TAZ	2021-2025	2025-2030
Hangzhou City	5.5%	4.5%
Ningbo City	5.5%	4.5%
Jiaxing City	5.5%	4.5%
Huzhou City	6.0%	4.5%
Shaoxing City	6.0%	4.5%
Shaoshan City	6.0%	4.5%
Wenzhou City	6.0%	4.5%
Jinhua City	5.5%	4.5%
Quzhou City	5.5%	4.5%
Taizhou City	5.5%	4.5%
Lishui City	6.0%	4.5%
Shanghai City	5.0%	4.5%
Jiansu Province	5.5%	4.5%
Anhui Province	6.0%	4.5%
Jianxi Province	6.5%	5.0%
Fujian Province	6.0%	4.5%

Source: Consultant, 2022

Note: with reference to other global economic prediction sources such as the Organization for Economic Cooperation and Development (OECD), the GDP growth rates after 2020 were estimated based on a declining trend of 1.0-2.0% every five years.

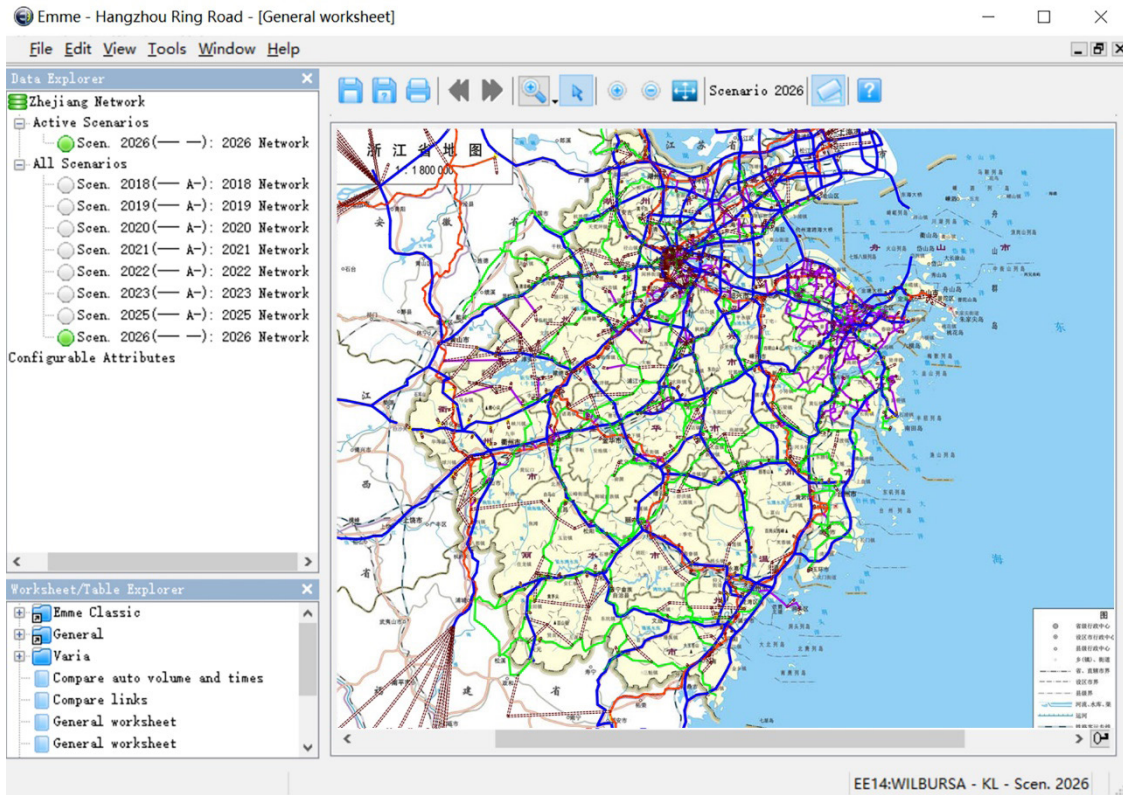
3.4 TRAFFIC FORECAST MODEL DEVELOPMENT

3.4.1 Road Network

In the base year road network development process, the Consultant made use of the existing Zhejiang road network data from the highway toll clearance system, the provincial expressway network map and the Zhejiang future expressway plan as building blocks to develop the highway supply model to be coded into EMME/3. All major highway facilities were included in the EMME/3 network, including expressways and national highways.

All the major highways in the network would include characteristics such as speed, capacity, distance and levels of operation (expressed in delays and cost indices). The distances between stations on the road network were derived from the current toll system. As for the locations and distances of the national and provincial highways, the Consultant referred to Zhejiang Province Road Map for verification purposes. Figure 3-7 shows the EMME/3 Road Network for this Study.

Figure 3-7 Road Network of Zhejiang Province



Source: Consultant, 2022

3.4.2 Volume Delay Functions

Travel time is usually derived directly from speed which in turn would be influenced by the level of congestion on the road. As a popular expressway, the Project Highway has a relatively high degree of congestion. To estimate future travel speeds under continuous traffic growths, the use of a “capacity constrained” assignment model would be necessary. The resultant travel volumes and levels of service were stored in the data bank. The Volume Delay Function (VDF) used in the study model could be represented as:

$$VDF = Len * [60 / Sf + A * (V/C - R1) + B * (V/C - R2)]$$

<i>Note:</i>	VDF	=	Volume Delay Functions
	Len	=	Distance
	Sf	=	Free Flow Speed
	V/C	=	Volume to Capacity Ratio
	R1, R2	=	Volume to Capacity Ratio Coeff
	A, B	=	Model Coefficient

3.4.3 Passenger Car Unit (PCU)

All vehicles were converted into equivalent “passenger car units (PCU)” before they were taken into account in the forecasting model. The PCU conversion factors used by the Consultant in this study were summarised in Table 3-7.

Table 3-7 Passenger Car Unit (PCU) Conversion Factor

Mode	Class	Description	Conversion Factor
Passenger Car	Class 1	9 seats or less (less than 6 meters long)	1.0
	Class 2	10-19 seats (less than 6 meters long)	1.0
	Class 3	39 seats or less (more than 6 meters long)	1.5
	Class 4	40 seats or more (more than 6 meters long)	1.5
Truck	Class 1	2 axles (the vehicle length is less than 6 meters and the maximum allowable total mass is less than 4500 kg)	1.0
	Class 2	2 axles (the vehicle length is not less than 6 meters or the maximum allowable total mass is not less than 4500 kg)	1.5
	Class 3	3 axles	2.5
	Class 4	4 axles	2.5
	Class 5	5 axles	4.0
	Class 6	6 or more axles	4.0

Source: Classification of Toll Road Vehicle Types (JT/T 489-2019) and Highway Engineering Design Standards (JTG B01-2014)

3.4.4 Toll Rate Assumptions

On May 16, 2019, the General Office of the State Council issued the guidelines of “Implementation Plan of Advancing Reform of Toll highway systems and Removal of the Provincial Boundary Expressway Toll Stations”. From January 1, 2020, the reform proposed to convert the truck weight charging system to a toll levying mechanism according to the truck types (axle). The strategy was to ensure that the overall toll costs for trucks would not be increased, and at the same time to implement a no-stop weighing detection scheme on entrances at toll stations. In consideration of the inputs from the General Office of the Zhejiang Provincial People’s Government on the above State Council’s guidelines (ZheZhengBanHan[2019] No. 96 -- December 30, 2019), the resultant toll standards of passenger cars and trucks on the Project Highway were shown in Table 3-8.

Table 3-8 Toll Charge Rates by Vehicle Types on Project Highways (Post Reform)

Class	Passenger Car/Truck	Distance Rate (RMB/Veh.-Km)	Vehicle Rate (RMB/Vehicle)
Passenger Car Class 1	9 seats or less (less than 6 meters long)	0.40	5
Passenger Car Class 2	10-19 seats (less than 6 meters long)	0.40	5
Passenger Car Class 3	39 seats or less (more than 6 meters long)	0.80	10
Passenger Car Class 4	40 seats or more (more than 6 meters long)	1.20	15
Truck Class 1	2 axles (the vehicle length is less than 6 meters and the maximum allowable total mass is less than 4500 kg)	0.450	0
Truck Class 2	2 axles (the vehicle length is not less than 6 meters or the maximum allowable total mass is not less than 4500 kg)	0.841	0
Truck Class 3	3 axles	1.321	0
Truck Class 4	4 axles	1.639	0
Truck Class 5	5 axles	1.675	0
Truck Class 6	6 or more axles	1.747	0

Source: ShangSan Expressway Co. Ltd, 2022

Note: Since February 12, 2020, entry fees will no longer be charged for legally loaded container vehicles, and the preferential policy on tolls for international standard container vehicles has been extended from 10 designated toll stations to the province-wide expressway network, at a flat rate of 65%.

According to the circular of the General Office of the Zhejiang Provincial People's Government on the Continued Implementation of the Province-wide Toll Collection Policy for Toll Road (issued by the Zhejiang Government Office [2021] No. 77), it is clear that the Project Highway offered a 15% toll discount for the trucks of legal loading and using the non cash payment card and ETC from January 1, 2022.

In the beginning of 2020, the Ministry of Transport issued a Notice on “Lifting of Toll Charges on Toll Highways During the Control Period of the Novel Coronavirus Disease (Jiao Gong Lu Ming Dian [2020] No. 62)” A subsequent Notice on “Resumption of Toll Collection on Toll Highways” was also issued by the Ministry of Transport. From February 17, 2020 to May 5, 2020 (79 days), all vehicles were exempted from charges on toll highways. With reference to the Guangxi Zhuang Autonomous Region approach, “During the COVID-19 epidemic prevention and control period, free passage time will not be counted in the original concession period. After the free passage period, the deadline for the original concession period of all toll road in the region will be extended according to the cumulative 79 days of free passage (from February 17, 2020 to May 5, 2020).”

The forecast assumes that the current pricing standards (including container ETC vehicles 35% discount, truck ETC vehicles 15% discount, passenger cars ETC 5% discount, the government to pay) remain unchanged.

According to the “Implementation Plan for the Toll Exemption of Small Vehicles for Major Holidays” issued on July 24, 2012, small vehicles will be exempted from toll on the statutory holidays in the Spring Festival, the Ching Ming Festival, the Labor Day, and the National Day. The toll exempted vehicles would include those of less than 7 seats (including 7 seats) passenger vehicles and motorcycles. The exemption period starts at 00:00 on the first day till the 24:00 on the last day of the holidays. The toll exemption is applied on toll roads (including the Project Highway), bridges and tunnels that are subject to the approval of the Highway Law of the People’s Republic of China and the Regulations for the Administration of Toll Roads. In this study, the Consultant considered the impacts of the above preferential scheme and made relevant adjustments when forecasting the Project Highway traffic and revenue in order to attain more accurate results.

In order to determine the average number of days affected by this preferential scheme each year, the Consultant referred to the “Implementation Plan for the Toll Exemption of Small Vehicles for Major Holidays”. It was assumed that the number of days of the four national holidays in the Spring Festival, the Ching Ming Festival, the Labor Day and the National Day are:

- Spring Festival – 7 days
- Ching Ming Festival – 5 days
- Labor Day – 3 days
- National Day – 7days

There is a total of 22 days for the above four major public festivals. This assumption was incorporated into the revenue calculations for the Project Highways. The Consultant also assumed this treatment will last till the end of the Project Highway’s concession period.

3.4.5 Future Road Network Assumption

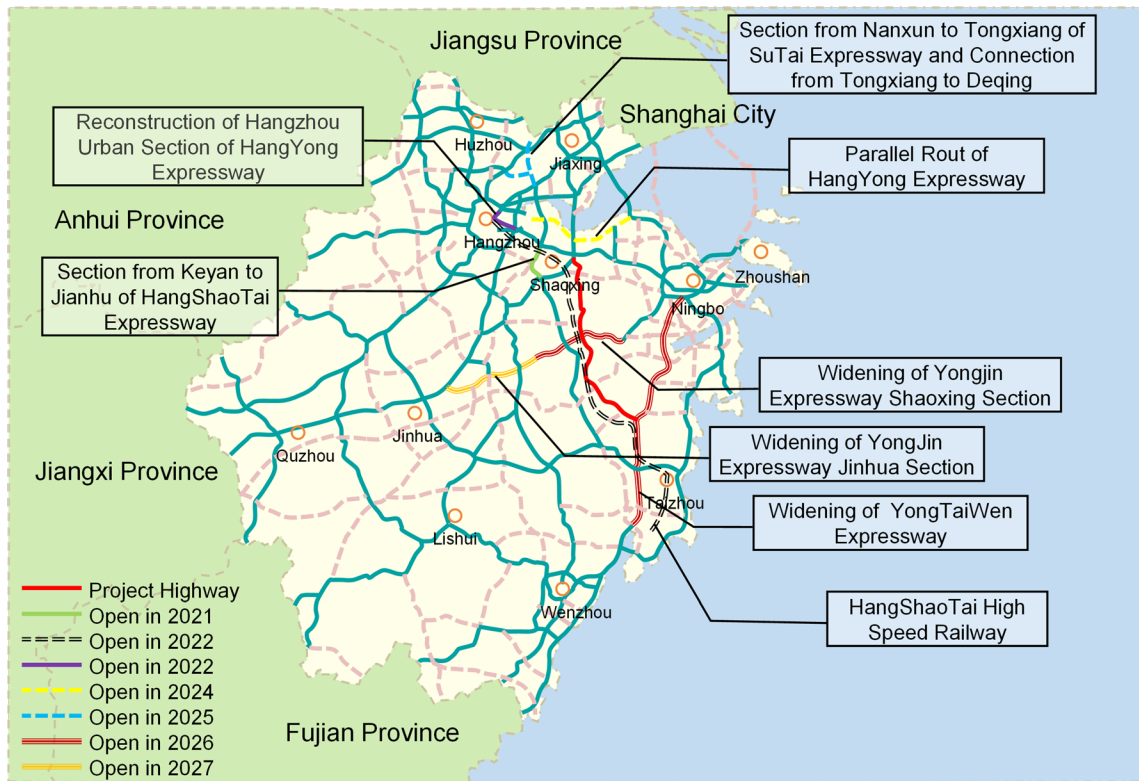
In order to analyze the impact of changes in the surrounding road network on the traffic flows of the Project Highway (induced or diverted), the Consultant consults the “14th Five-Year Plan” and the most recent expressway construction plans of the vicinity areas. The Consultant also reviewed the progress of the roads currently under construction and summarized the changes in the future road network in Zhejiang Province as shown in Table 3-9 and Figure 3-8.

Table 3-9 Future Road Network Construction Plan

No.	Road Name	Opening Year	Length (Km)	No. of Lanes	Design Speed (Km/h)
1	Section from Keyan to Jianhu of HangShaoTai Expressway	End of 2021	16	6	100
2	HangShaoTai High Speed Railway	Beginning of 2022	266.9	2	350
3	Reconstruction of Hangzhou Urban Section of HangYong Expressway	End of 2022	23.6	6	80
4	Widening of YongTaiWen Expressway	2023-2026	365	4 to 8	100
5	Parallel Rout of HangYong Expressway	Beginning of 2024	137	6	120
6	Section from Nanxun to Tongxiang of SuTai Expressway and Connection from Tongxiang to Deqing	Beginning of 2025	40	6	100
7	Widening of Yongjin Expressway Shaoxing Section	2023-2026	73.378	4 to 8	100
8	Widening of Yongjin Expressway Jinhua Section	2024-2027	69.747	4 to 8	100

Source: Consultant, 2022

Figure 3-8 Location of Future Highways



Source: Consultant, 2022

3.4.6 Road Capacity

Major factors that may affect the capacity of a highway include design standards (design speed), vehicle type composition, hourly distribution of daily traffic demands (peak hour factor) etc. The assumptions adopted for the planning and design of the Project Highway were: design speed of 120 km/hr, level of service C, capacity of 1600 pcu/lane/hr (Highway Engineering Technical Specifications – JTG B01-2014), a peak hour factor of 6.50% and the average passenger car conversion factor of 1.72pcu/veh (derived from survey data). The capacity of the Project Highway could be estimated as:

$$1,600(\text{pcu/lane/hr}) \times 4(\text{lanes}) \div 1.72(\text{pcu/veh}) \div 6.50\% = 57,245(\text{vehicles/day})$$

Table 3-10 Relationship of Expressway Levels of service and Maximum Capacity

Level of Service	Volume/Capacity (V/C)	Design Speed		
		120 Maximum Capacity [pcu/(h•ln)]	100 Maximum Capacity [pcu/(h•ln)]	80 Maximum Capacity [pcu/(h•ln)]
A	V/C≤0.35	750	730	700
B	0.35<V/C≤0.55	1,200	1,150	1,100
C	0.55<V/C≤0.75	1,650	1,600	1,500
D	0.75<V/C≤0.90	1,980	1,850	1,800
E	0.90<V/C≤1.00	2,200	2,100	2,000
F	V/C>1.00	0~2,200	0~2,100	0~2,000

Source: Highway Engineering Technical Specifications – JTG B01-2014

3.4.7 Trip Distribution

This Study adopted the “Generalized Cost” as the factor to influence the decisions to select travel paths by the trip makers. It will arrive at a balanced trip distribution of traffic on the road network within the study area. The “generalized cost” includes all elements and factors (such as travel time, travel distance, vehicle operation cost and toll costs etc) that may affect the choice of travel paths of the car drivers. The “generalized cost” of a road section can be estimated as:

$$GC_{ij} = T_{ij} + [C_{ij} + Tol_{ij}]/VOT$$

<i>Note:</i>	GC_{ij}	=	Travel Generalized Cost
	T_{ij}	=	Travel Time between TAZ _i to TAZ _j
	C_{ij}	=	Travel Cost between TAZ _i and TAZ _j , such as vehicle operating cost.
	Tol_{ij}	=	Toll Cost from TAZ _i and TAZ _j
	VOT	=	Value of Time for different vehicle types

The distribution model used by the Consultant has taken into consideration of road users' willingness to pay certain travel costs and travelling speed/congestion levels on the Project Highway in comparison to other competing toll highways. From the trip matrices, the trips between any two TAZs would be allocated to the path of the least generalized cost. Traffic assignment is an iterative process, in which every trip during an iteration would be assigned to the path of the least generalized cost. Generalized cost includes travel time, travel distance, toll charges and vehicle operation costs. For example: if there are 2 highways of the same class and distance are available during certain iteration, the highway which carries the lower traffic volume would be selected as the travel path. However, in subsequent iterations, these 2 highways may have different generalized costs which would then dictate which would be the more attractive path. This process will be repetitive until traffic volumes on the competing highway facilities would reach an equilibrium condition.

3.5 PROJECT HIGHWAY OD TRAVEL BY MODES

After the traffic distribution of the OD matrices was completed in Zhejiang Province, the future traffic demands between each pair of traffic zones using the Project Highway could be determined. To facilitate easier understanding and summarization, the Consultant aggregated the 561 traffic zones (OD) into 16 superzones or TAZs (see economic analysis section).

According to the model allocation results, the Consultant found that the proportion of existing passenger car and truck traffic, travelling among the Shaoxing City, the Hangzhou City, the Taizhou City, the Wenzhou City and the Ningbo City, on the Project Highway were 69.4% and 47.9% respectively. In addition, other major origins/destinations are Jiaxing City, Jinhua City, Shanghai City and Jiangsu Province.

Table 3-11 and Table 3-12 showed the future OD patterns of passenger cars and trucks on the Project Highway.

Table 3-11 Passenger Car OD Patterns on Project Highway

OD	Hangzhou	Ningbo	Jiaxing	Huzhou	Shaoxing	Zhoushan	Wenzhou	Jinhua	Quzhou	Taizhou	Lishui	Shanghai	Jiangsu	Anhui	Jiangxi	Fujian	Total
Hangzhou																	13.0%
Ningbo					8.9%		1.4%	1.2%	0.1%	2.7%							7.2%
Jiaxing					4.5%		1.1%	0.2%	0.1%	0.1%	0.1%						3.8%
Huzhou					2.2%		0.6%	0.1%	0.2%	0.8%						0.1%	0.6%
Shaoxing		4.5%	2.5%	0.4%	0.3%	0.3%	1.2%	1.2%	0.1%	0.2%	0.1%	1.8%	1.3%	0.1%	0.1%	0.1%	45.0%
Zhoushan					21.2%		0.3%	1.2%	0.1%	1.2%							0.3%
Wenzhou	1.3%	1.1%	0.5%	0.1%	1.1%		0.9%	0.2%		2.8%		0.5%	0.6%				9.1%
Jinhua		1.2%	0.1%		1.1%		0.2%	0.2%		0.1%		0.1%					2.9%
Quzhou		0.1%			0.1%		0.1%	0.1%									0.2%
Taizhou	2.5%		0.8%	0.2%	1.2%		2.8%	0.1%				0.7%	1.3%	0.1%			9.8%
Lishui		0.1%			0.1%												0.3%
Shanghai					1.8%		0.6%	0.1%		0.8%						0.2%	3.4%
Jiangsu					1.3%		0.7%	0.1%		1.4%						0.2%	3.6%
Anhui					0.1%												0.1%
Jiangxi					0.1%												0.4%
Fujian	12.9%	7.4%	4.0%	0.7%	44.3%	0.3%	9.4%	3.0%	0.3%	10.0%	0.3%	3.2%	3.4%	0.2%	0.1%	0.5%	100.0%
Total																	

Source: Consultant, 2022

Table 3-12 Truck OD Patterns on Project Highway

OD	Hangzhou	Ningbo	Jiaxing	Huzhou	Shaoxing	Zhoushan	Wenzhou	Jinhua	Quzhou	Taizhou	Lishui	Shanghai	Jiangsu	Anhui	Jiangxi	Fujian	Total
Hangzhou					4.4%		0.7%	0.1%		1.4%						0.1%	6.7%
Ningbo					4.1%		0.7%	0.8%	0.2%		0.1%						6.1%
Jiaxing					3.4%		1.2%	1.2%	0.1%	1.3%	0.2%					0.4%	7.7%
Huzhou					0.8%		0.2%			0.5%							1.6%
Shaoxing	4.5%	4.3%	3.9%	0.8%	16.1%	0.1%	1.3%	1.5%	0.1%	1.3%	0.1%	1.3%	1.9%	0.2%	0.2%		37.7%
Zhoushan					0.1%												0.1%
Wenzhou	0.5%	0.7%	1.1%	0.2%	1.4%		0.6%	0.1%		1.6%		0.9%	1.5%				8.7%
Jinhua	0.1%	0.8%	1.1%		2.1%		0.1%			0.1%		0.4%	0.4%				5.1%
Quzhou		0.1%			0.1%												0.2%
Taizhou	1.2%		1.3%	0.4%	1.2%		1.7%	0.1%				0.9%	2.2%	0.1%			9.1%
Lishui		0.1%	0.2%		0.1%							0.1%					0.6%
Shanghai					1.0%		0.9%	0.5%		0.9%	0.1%					0.8%	4.2%
Jiangsu					2.0%		1.9%	0.5%		2.9%	0.1%					1.3%	8.7%
Anhui					0.2%					0.1%							0.2%
Jiangxi		0.4%			0.1%												0.6%
Fujian	0.1%		0.4%		0.2%		9.4%	4.7%	0.5%	10.1%	0.6%	0.8%	1.0%	0.3%	0.1%	2.8%	26%
Total	6.5%	6.5%	7.9%	1.4%	37.5%	0.1%	9.4%	4.7%	0.5%	10.1%	0.6%	4.4%	7.1%	0.3%	0.1%	2.8%	100.0%

Source: Consultant, 2022

4 TRAFFIC AND TOLL REVENUE FORECAST RESULTS

4.1 Description of Forecast Options

Based on the previous research and analysis, the base year of 2021 was referenced in forecasting traffic volumes from 2022 to 2030. The traffic volumes in subsequent years were based on the traffic data of the base year (2021) and the annual average daily traffic volumes were forecasted by the computer assignment model. **The toll revenue forecasting was based on the current prices. As non-economic professionals, the Consultant has not made assumptions related to the future inflation rates.**

Table 4-1 Description of Forecast Options

Assumption

1. Growth rate determined according to the details described in the socio-economic-transport-model in Chapter 3.
2. At the end of 2021, Section from Keyan to Jianhu of HangShaoTai Expressway was opened.
3. At the beginning of 2022, HangShaoTai High Speed Railway was opened.
4. At the end of 2022, reconstruction of Hangzhou Urban Section of HangYong Expressway will be completed.
5. Between 2023 to 2024, COVID-19 epidemic will be gradually stopped and the traffic will return to normal growth.
6. At the beginning of 2024, Parallel Rout of HangYong Expressway will be opened.
7. At the beginning of 2025, Section from Nanxun to Tongxiang of Sutai Expressway and Connection from Tongxiang to Deqing will be opened.
8. From 2023 to 2026, YongTaiWen Expressway will be widened.
9. From 2023 to 2026, YongJin Expressway Shaoxing Section will be widened.
10. From 2024 to 2027, YongJin Expressway Jinhua Section will be widened.
11. After December 25, 2030, toll charge on the Projet Highway will be stopped.

Source: Consultant, 2022

4.2 Traffic Impacts Caused by the New Highways

According to the model analysis, the coming years that would have greater impacts on the Project Highway are 2022, 2024 and 2027. The impacts of the newly opened highways on the Project Highway in the above years were shown in Table 4-2 below.

Table 4-2 Traffic Impacts Due to New Highways and Charging Policy

Highway/Policy	Schedule	Diversion/Inducement Impacts on Project Highway	Magnitude of Impacts
Section from Keyan to Jianhu of HangShaoTai Expressway was opened	End of 2021	With the opening of the Section from Keyan to Jianhu of HangShaoTai Expressway, the whole line of the expressway will be opened. Some vehicles between Hangzhou Direction to Shaoxing City, Shengzhou City, Xinchang County and Taizhou City will turn to the HangShaoTai Expressway, diverting traffic from the Project Highway.	Traffic impact: -7.8% Revenue impact: -5.8%
COVID-19 in Shanghai spreaded	Beginning of 2022	From March to May 2022, the Shanghai epidemic led to strict personnel control measures in many area in Zhejiang Province, resulting in a significant drop in the flow of the Project Highway. From January to April 2022, traffic volume decreased by 20.2% year-on-year, and toll revenues decreased by 18% year-on-year.	Traffic impact: -8.8% Revenue impact: -7.5%

Highway/Policy	Schedule	Diversion/Inducement Impacts on Project Highway	Magnitude of Impacts
HangShaoTai High Speed Railway will be opened	Beginning of 2022	With the opening of the HangShaoTai High Speed Railway, people from Hangzhou, Shaoxing and other places to Taizhou can choose the High Speed Railway, travel time can be saved by an hour. Due to the epidemic, the public's willingness to travel by public transport is not very strong at present. The triage effect is divided into two years.	<u>2022</u> Traffic impact: -1.0% Revenue impact: -0.6% <u>2023</u> Traffic impact: -2.7% Revenue impact: -1.5%
COVID-19 will begin to weaken.	Between 2023 to 2024	As control measures (e.g. 72-hour nucleic acid testing) are implemented and regularised, restrictions on movement of people will be gradually relaxed. Assuming between 2023 to 2024, the impact of the COVID-19 will gradually disappear, by then the whole highway traffic will gradually return to normal.	<u>2023</u> Traffic impact: +5.1% Revenue impact: +5.0% <u>2024</u> Traffic impact: +3.5% Revenue impact: +3.4%
Widening of YongJin Expressway	From 2023 to 2027	The Shaoxing and Jinhua Sections of the YongJin Expressway will be partially closed during the widening period, resulting in reduced traffic capacity and operating conditions. The vehicles will choose HangShaoTai Expressway and ZhuYong expressway as alternative routes.	Traffic impact: -2.1% Revenue impact: -1.5%

Highway/Policy	Schedule	Diversion/Inducement Impacts on Project Highway	Magnitude of Impacts
Section from Nanxun to Tongxiang of SuTai Expressway and Connection from Tongxiang to Deqing will be opened.	Beginning of 2025	Minimal effect	Minimal effect
Widening of YongTaiWen Expressway Will be completed.	Beginning of 2027	With the completion of the Widening of YongTaiWen Expressway, travel conditions will be greatly improved, with some vehicles between Shanghai, Jiaying and Jiangsu to Wenzhou and Fujian moving to the YongTaiWen Expressway.	Traffic impact: -3.0% Revenue impact: -3.4%

Source: Consultant, 2022

4.3 Forecast Results of Traffic and Toll Revenues

Based on the assumptions stipulated in Table 4-1 and the application of the traffic forecast model (see Chapter 3), the Consultant was able to develop the traffic and toll revenue forecasts. The results were summarized in Tables 4-3 to 4-5.

Table 4-3 Annual Average Daily Traffic Volumes by Vehicle Classes on Project Highway

Year	PC1	PC2	PC3	PC4	Truck 1	Truck 2	Truck 3	Truck 4	Truck 5	Truck 6	Total	Growth Rate
2022 ⁽²⁾	16,214	68	258	172	2,521	1,795	866	1,280	740	6,108	30,022	-11.1%
2023 ⁽³⁾	16,549	83	282	188	2,830	2,018	1,074	1,619	834	6,537	32,014	6.6%
2024 ⁽⁴⁾	18,299	96	306	203	3,064	2,183	1,207	1,871	893	7,024	35,146	9.8%
2025 ⁽⁵⁾	19,621	102	310	206	3,212	2,289	1,266	1,990	949	7,474	37,419	6.5%
2026	20,841	109	313	208	3,345	2,385	1,311	2,113	1,000	7,440	39,065	4.4%
2027 ⁽⁶⁾	21,718	113	315	205	3,403	2,405	1,314	2,102	947	7,576	40,098	2.6%
2028 ⁽⁷⁾	22,909	119	318	206	3,529	2,494	1,363	2,205	975	7,556	41,674	3.9%
2029	24,128	126	322	208	3,238	2,470	1,343	2,086	1,022	7,914	42,857	2.8%
2030 ⁽⁸⁾	25,310	116	302	162	3,344	2,446	1,322	2,177	1,067	8,262	44,508	3.9%

Source: Consultant, 2022

Note:

- (1) Traffic volumes include general toll-free vehicles, but exclude toll free vehicles during the major festival holidays. The latest vehicle classifications, as shown in Table 3-7, were used.
- (2) Between March to May, 2022, the Shanghai epidemic spreaded. At the end of 2021, Section from Keyan to Jianhu of HangShaoTai Expressway was opened. At the beginning of 2022, HangShaoTai High Speed Railway was opened.
- (3) At the end of 2022, reconstruction of Hangzhou Urban Section of HangYong Expressway will be completed. In 2023, the impact of COVID-19 will begin to weaken.
- (4) In 2024, the COVID-19 will be ended. In 2024, the Parallel Rout of HangYong Expressway will be opened.
- (5) At the beginning of 2025, Section from Nanxun to Tongxiang of Sutai Expressway and Connection from Tongxiang to Deqing will be opened.
- (6) At the beginning of 2027, Widening of YongTaiWen Expressway and YongJin Expressway Shaoxing Section will be opened.
- (7) At the beginning of 2028, Widening of YongJin Expressway Jinhua Section will be opened.
- (8) After December 25, 2030, toll charge on the Projet Highway will be stopped.
- (9) Annual average daily traffic volume is the weighted average daily traffic volume by road section: refers as the summation of the production of the annual daily average traffic volume and the milage of each section, divided by sum of the milage.

Table 4-4 Annual Average Daily Traffic Volumes by Road Section on Project Highway

Year	Guzhu Int.- Shaozhu Int.- Dongguan Sta.		Shangpu Sta.- Haoba Sta.- Dongguan Sta.- Haoba Sta.		Shangpu Sta.- Zhangzhen Sta.		Zhangzhen Sta.- Sanjie Sta.		Shengzhou Int.- Shengzhou Int.- Xinchang Sta.		Xinchang Sta.- Xinchangnann Sta.- Shuangcai Sta.- Baihe Sta.- Tiantai Sta.- Yangtou Sta.		Xinchangnann Sta.- Shuangcai Sta.- Baihe Sta.- Tiantai Sta.- Yangtou Sta.- Wudai Int.		
	Shaozhu Int.	Dongguan Sta.	Shangpu Sta.	Haoba Sta.	Shangpu Sta.	Zhangzhen Sta.	Sanjie Sta.	Shengzhou Int.	Shengzhou Int.	Xinchang Sta.	Xinchangnann Sta.	Shuangcai Sta.	Baihe Sta.	Tiantai Sta.	Yangtou Sta.
2022 ^b	66,599	41,809	42,172	39,524	38,420	36,922	36,400	31,141	29,784	23,433	24,155	22,901	29,784	23,433	24,155
2023 ^b	79,122	45,140	45,340	42,370	41,141	39,470	38,834	32,940	31,626	24,532	25,351	23,948	31,626	24,532	25,351
2024 ^c	86,925	49,526	49,733	46,531	45,195	43,373	42,683	36,171	34,716	26,891	27,808	26,257	34,716	26,891	27,808
2025 ^d	92,434	52,661	52,887	49,528	48,112	46,178	45,450	38,494	36,977	28,620	29,613	27,950	36,977	28,620	29,613
2026	98,629	55,190	54,345	51,842	50,347	48,306	47,541	40,163	38,629	29,764	30,829	29,060	38,629	29,764	30,829
2027 ^e	93,239	57,127	55,432	53,878	52,321	50,195	49,470	41,672	39,932	30,546	31,685	29,808	39,932	30,546	31,685
2028 ^f	97,783	57,127	55,432	56,351	54,716	52,480	51,722	43,480	41,676	31,757	32,973	30,984	41,676	31,757	32,973
2029	101,962	57,127	55,432	58,420	56,704	54,357	53,565	44,870	43,000	32,537	33,831	31,728	43,000	32,537	33,831
2030 ^g	106,801	57,127	55,432	59,644	59,313	56,852	56,025	46,867	44,932	33,912	35,286	33,067	44,932	33,912	35,286

Source: Consultant, 2022

Note:

- (1) Traffic volumes include general toll-free vehicles, but exclude toll free vehicles during the major festival holidays. The latest vehicle classifications, as shown in Table 3-7, were used.
- (2) Between March to May, 2022, the Shanghai epidemic spreaded. At the end of 2021, Section from Keyan to Jianhu of HangShaoTai Expressway was opened. At the beginning of 2022, HangShaoTai High Speed Railway was opened.
- (3) At the end of 2022, reconstruction of Hangzhou Urban Section of HangYong Expressway will be completed. In 2023, the impact of COVID-19 will begin to weaken.
- (4) In 2024, the COVID-19 will be ended. In 2024, the Parallel Rout of HangYong Expressway will be opened.
- (5) At the beginning of 2025, Section from Nanxun to Tongxiang of Sutai Expressway and Connection from Tongxiang to Deqing will be opened.
- (6) At the beginning of 2027, Widening of YongTaiWen Expressway and YongJin Expressway Shaoxing Section will be opened.
- (7) At the beginning of 2028, Widening of YongJin Expressway Jinhua Section will be opened.
- (8) After December 25, 2030, toll charge on the Project Highway will be stopped.

Table 4-5 Toll Revenue Forecasts on Project Highway

Year	Average Daily Toll Revenue (RMB)	Daily Growth Rate	Annual Toll Revenue (RMB10,000)
2022	¥3,199,513	-7.7%	¥116,782
2023	¥3,467,236	8.4%	¥126,554
2024	¥3,794,333	9.4%	¥138,873
2025	¥4,033,716	6.3%	¥147,231
2026	¥4,160,776	3.1%	¥151,868
2027	¥4,240,805	1.9%	¥154,789
2028	¥4,361,043	2.8%	¥159,614
2029	¥4,477,505	2.7%	¥163,429
2030	¥4,640,001	3.6%	¥166,576
Total Toll Revenue Between 2022 to 2030			¥1,325,716
Toll Revenue in Extended 79-day			
2030	¥4,640,001	—	¥2,784
2031	¥4,809,964	—	¥35,113
Total Toll Revenue in 79-day			¥37,897

Source: Consultant, 2022

Note:

- (1) The toll revenue shall be pre-tax income (including tax).
- (2) Toll revenue forecast results excluded toll free vehicles
- (3) The forecast results also took into account that there would be free passage of passenger cars with 7 seats or less in holidays, such as Spring Festival, Qingming Festival, Labor Day and National Day. The number of free passage days in the future will be 22 days per year;
- (4) The concessions on HuHang Expressway (Jiaxing Section) will end by December 25, 2030.

5. CONCLUSION

The Project Highway serves as one of the “verticals” in the planned “two verticals, two horizontals, eighteen links, three circulars and three passageways” Highway Network in the Zhejiang Province. It is also the most important expressway link, connecting Shanghai and Hangzhou, the two central cities of the Yangtze River Delta.

The forecasting of future traffic volumes and toll revenues were from 2022 to 2030. This Study was based on the latest data collection and the expertise in toll highway experience of the Consultant. The prediction process of this study used the state-of-art technical methods and recognized industry practices. However, it should be noted that there are still uncertainties in the forecasting of future traffic volume and revenue for any toll road. As a result, there may be discrepancies between the predicted values and the actual results in the future. In addition, the traffic volume and revenue forecasts shown in this report only represent the overall long-term trend. In any given year, the differences between predicted and actual results may also be influenced by other factors. Therefore, although the Consultant endeavors to ensure the technicality of the information provided, it does not guarantee the accuracy or reliability of the data provided, and will not be held liable for any losses or damages caused by the forecasting results. The forecast results were summarized as follows:

- (1) From 2022 to 2030, it was estimated that the total toll revenue on the Project Highway would be RMB13.257 billion.
- (2) The Project Highway will obtain an additional toll revenue of RMB379 million in extended the 79-day charge period.

REPORT FROM DELOITTE**INDEPENDENT ASSURANCE REPORT ON THE CALCULATIONS OF DISCOUNTED FUTURE ESTIMATED CASH FLOWS IN CONNECTION WITH THE VALUATION OF THE ENTIRE EQUITY INTEREST IN ZHEJIANG SHANGSAN EXPRESSWAY CO., LTD. (“SHANGSAN CO”)****TO THE DIRECTORS OF ZHEJIANG EXPRESSWAY CO., LTD. (THE “COMPANY”)**

We have examined the calculations of the discounted future estimated cash flows on which the valuation prepared by Jones Lang LaSalle Corporate Appraisal and Advisory Limited dated 13 June 2022 of the entire equity interest in Shangsans Co as at 30 April 2022 (the “**Valuation**”) is based. Shangsans Co is a company incorporated in the People’s Republic of China which is principally engaged in the operation and management of toll collection rights of the Shangsans Expressways. The Valuation based on the discounted future estimated cash flows is regarded as a profit forecast under Rule 14.61 of the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (the “**Listing Rules**”) and will be included in an announcement dated 15 June 2022 to be issued by the Company in connection with the possible major transaction and connected transactions in relation to the capital increase and deemed disposal of the equity interest in Shangsans Co (the “**Announcement**”).

Directors’ Responsibility for the Discounted Future Estimated Cash Flows

The directors of the Company are responsible for the preparation of the discounted future estimated cash flows in accordance with the bases and assumptions determined by the directors and set out in the “Principal assumptions for the income approach adopted for the Shangsans Valuation Report” section of the Announcement (the “**Assumptions**”). This responsibility includes carrying out appropriate procedures relevant to the preparation of the discounted future estimated cash flows for the Valuation and applying an appropriate basis of preparation; and making estimates that are reasonable in the circumstances.

Our Independence and Quality Control

We have complied with the independence and other ethical requirements of the “Code of Ethics for Professional Accountants” issued by the Hong Kong Institute of Certified Public Accountants (the “**HKICPA**”), which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior.

Our firm applies Hong Kong Standard on Quality Control 1 “Quality Control for Firms that Perform Audits and Reviews of Financial Statements, and Other Assurance and Related Services Engagements” issued by the HKICPA and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Reporting Accountants' Responsibility

Our responsibility is to express an opinion on whether the calculations of the discounted future estimated cash flows have been properly compiled, in all material respects, in accordance with the Assumptions on which the Valuation is based and to report solely to you, as a body, as required by Rule 14.62(2) of the Listing Rules, and for no other purpose. We do not assume responsibility towards or accept liability to any other person for the contents of this report.

Our engagement was conducted in accordance with Hong Kong Standard on Assurance Engagements 3000 (Revised) "Assurance Engagements Other Than Audits or Reviews of Historical Financial Information" issued by the HKICPA. This standard requires that we comply with ethical requirements and plan and perform the assurance engagement to obtain reasonable assurance on whether the discounted future estimated cash flows, so far as the calculations are concerned, have been properly compiled in accordance with the Assumptions. Our work was limited primarily to making inquiries of the Company's management, considering the analyses and assumptions on which the discounted future estimated cash flows are based and checking the arithmetic accuracy of the compilation of the discounted future estimated cash flows. Our work does not constitute any valuation of Shangsang Co.

Because the Valuation relates to discounted future estimated cash flows, no accounting policies of the Company have been adopted in its preparation. The Assumptions include hypothetical assumptions about future events and management actions which cannot be confirmed and verified in the same way as past results and these may or may not occur. Even if the events and actions anticipated do occur, actual results are still likely to be different from the Valuation and the variation may be material. Accordingly, we have not reviewed, considered or conducted any work on the reasonableness and the validity of the Assumptions and do not express any opinion whatsoever thereon.

Opinion

Based on the foregoing, in our opinion, the discounted future estimated cash flows, so far as the calculations are concerned, have been properly compiled, in all material respects, in accordance with the Assumptions.

Deloitte Touche Tohmatsu
Certified Public Accountants
Hong Kong
15 June 2022

LETTER FROM THE BOARD IN RELATION TO THE PROFIT FORECAST

Hong Kong Exchanges and Clearing Limited
12/F, Two Exchange Square,
8 Connaught Place, Central,
Hong Kong

June 15, 2022

Dear Sirs,

**POSSIBLE MAJOR TRANSACTION AND CONNECTED TRANSACTIONS – CAPITAL
INCREASE AND DEEMED DISPOSAL OF THE EQUITY INTEREST IN ZHEJIANG
SHANGSAN EXPRESSWAY CO., LTD. (“SHANGSAN CO”)**

We refer to the announcement of Zhejiang Expressway Cp., Ltd. (the “**Company**”) dated June 15, 2022 (the “**Announcement**”) in relation to the caption matter and the valuation report dated June 13, 2022 (the “**Shangsan Valuation Report**”) prepared by Jones Lang LaSalle Corporate Appraisal and Advisory Limited (“**Jones Lang LaSalle**”) in relation to the valuation of the entire equity interest of Shangsan Co.

We understand that Jones Lang LaSalle prepared the Shangsan Valuation Report based on the discounted cash flow method, and constitutes a profit forecast under Rule 14.61 of the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (the “**Listing Rules**”). Unless otherwise defined or if the context otherwise requires, all terms defined in the Announcement shall have the same meaning when used in this letter.

We have reviewed and discussed the bases and assumptions upon which the valuation of the entire equity interest of Shangsan Co has been made with Jones Lang LaSalle, and reviewed the valuation for which Jones Lang LaSalle is responsible.

We have also considered the report from Deloitte Touche Tohmatsu dated June 15, 2022 regarding whether the discounted future estimated cash flows, so far as the calculations are concerned, have been properly compiled in accordance with the bases and assumptions set out in the Shangsan Valuation Report. We have noted that the discounted future estimated cash flows do not involve the adoption of accounting policy.

On the basis of the foregoing, we are satisfied that the forecast included in the Shangsan Valuation Report and the valuation therein prepared by Jones Lang LaSalle has been made after due and careful enquiry.

This letter is for the sole purpose of Rule 14.62(3) of the Listing Rules and for no other purpose. We accept no responsibility to any other person in respect of, arising out of or in connection with this letter.

Yours faithfully
On behalf of the Board
Zhejiang Expressway Co., Ltd.
Yuan Yingjie
Executive Director

1. RESPONSIBILITY STATEMENT

This Circular, for which the Directors collectively and individually accept full responsibility, includes particulars given in compliance with the Listing Rules for the purpose of giving information with regard to the Group. The Directors, having made all reasonable enquiries, confirm that to the best of their knowledge and belief the information contained in this Circular is accurate and complete in all material respects and not misleading or deceptive, and there are no other matters the omission of which would make any statement herein or this Circular misleading.

2. DISCLOSURE OF INTERESTS

(a) Interests in the Company and its associated corporation

As at the Latest Practicable Date, none of the Directors, Supervisors and chief executives of the Company had an interest or short position in any shares, underlying shares or equity derivatives or debentures of the Company or any associated corporations (within the meaning of Part XV of the SFO) which is required to be (i) notified to the Company and the Stock Exchange pursuant to Divisions 7 and 8 of Part XV of the SFO (including interests and short positions which the Directors, Supervisors or chief executives of the Company was taken or deemed to have under such provisions of the SFO); or (ii) entered in the register kept by the Company pursuant to section 352 of the SFO; or (iii) notified to the Company and the Stock Exchange pursuant to the Model Code for Securities Transactions by Directors of Listed Companies.

As at the Latest Practicable Date, none of the Directors, Supervisors or chief executives of the Company or their spouses or children under 18 years of age were granted or had exercised any right to subscribe for any equity or debt securities of the Company or any of its associated corporations (within the meaning of Part XV of the SFO).

(b) Substantial shareholders

As at the Latest Practicable Date, so far as is known to the Directors and chief executives of the Company, persons (other than the Directors and the chief executives of the Company) who had interests and short positions in the Shares and underlying Shares of the Company (within the meaning of Part XV of the SFO) as recorded in the register required to be kept under section 336 of the SFO, or as otherwise notified to the Company and the Stock Exchange, were set out as follows:

Name of substantial shareholder	Capacity	Number of Shares	Percentage of the issued share capital of the Company (domestic shares)
Communications Group	Beneficial owner	2,909,260,000	100%

Name of substantial shareholder	Capacity	Number of Shares	Percentage of the issued share capital of the Company (H Shares)
China Merchants Expressway Network & Technology Holdings Co., Ltd.	Beneficial owner	258,132,000 (L)	18.00%
Citigroup Inc.	Interest of controlled corporations and approved lending agent	117,244,386 (L)	8.17%
		20,567,176 (S)	1.43%
		96,054,938 (P)	6.69%
JPMorgan Chase & Co.	Interest of controlled corporations, investment manager, person having a security interest in shares and approved lending agent	121,053,079 (L)	8.44%
		28,315,209 (S)	1.97%
		56,189,005 (P)	3.91%
BlackRock, Inc.	Interest of controlled corporations	104,431,277 (L)	7.28%
		4,128,000 (S)	0.29%

Notes:

- (1) The letter "L" denotes the person's long position in such Shares.
- (2) The letter "S" denotes the person's short position in such Shares.
- (3) The letter "P" denotes the person's interests in a lending pool.

Save as disclosed above, as at the Latest Practicable Date, no other persons had any interests or short positions in the shares or underlying shares of the Company that were required to be recorded pursuant to Section 336 of the SFO, or as otherwise notified to the Company and the Stock Exchange. Other than Mr. Yu Zhihong, Mr. Jin Chaoyang, Mr. Fan Ye and Mr. Huang Jianzhang who are currently also employed by the Communications Group, no Director is a director or employee of a company which has an interest or short position in the shares and underlying shares of the issuer which would fall to be disclosed to the issuer under the provisions of Divisions 2 and 3 of Part XV of the SFO.

3. OTHER INTERESTS OF DIRECTORS

As at the Latest Practicable Date,

(a) Interests in service contracts

Each of the Directors and Supervisors has entered into a service agreement with the Company, which is effective from July 1, 2021 to June 30, 2024.

Save as disclosed above, none of the Directors or Supervisors had or was proposed to have a service contract with any member of the Group other than contracts expiring or determinable by the employer within one year without the payment of compensation other than the statutory compensation.

(b) Interests in assets

None of the Directors or Supervisors had any direct or indirect interest in any assets which had been acquired or disposed of by, or leased to, or which were proposed to be acquired or disposed of by, or leased to, any member of the Group since December 31, 2021, being the date to which the latest published audited financial statements of the Group were made up; and

(c) Interests in contracts or arrangements

None of the Directors or Supervisors was materially interested in any contract or arrangement entered into by the Company or any of its subsidiaries which was subsisting and significant in relation to the business of the Group taken as a whole.

4. DIRECTORS' COMPETING INTERESTS

As at the Latest Practicable Date, none of the Directors or their associates was interested in any business which competes or is likely to compete, either directly or indirectly, with the business of the Group other than those businesses to which the Directors and their associates were appointed to represent the interests of the Company and/or the Group.

5. LITIGATION

As at the Latest Practicable Date, so far as the Directors are aware, there was no litigation or claim of material importance was known to the Directors to be pending or threatened against any member of the Group.

6. EXPERTS AND CONSENTS

The following are the qualifications of the experts (the “**Experts**”) who have provided their opinion or advice, which are contained in this Circular:

Name	Qualification
Deloitte	certified public accountants
Jones Lang LaSalle	valuer
Octal Capital	a corporation licensed to carry out Type 1 (dealing in securities) and Type 6 (advising on corporate finance) regulated activities, under the SFO
WB Group	traffic consultant

As at the Latest Practicable Date, to the best knowledge of the Company, each of the Experts has no shareholding in any member of the Group nor has any right, whether legally enforceable or not, to subscribe for or to nominate persons to subscribe for securities in any member of the Group. Each of the Experts is a third party independent of the Company and its connected persons.

Each of the Experts has given and has not withdrawn its written consent to the issue of this Circular with the inclusion of its letter or report in the form and context in which it is included.

Each of the Experts has not, or has not had, direct or indirect interest in any assets which have been acquired or disposed of by, or leased to, any member of the Group or are proposed to be acquired or disposed of by, or leased to, any member of the Group since December 31, 2021, the date to which the latest published audited accounts of the Group was made up.

7. MATERIAL ADVERSE CHANGES

As at the Latest Practicable Date, the Directors were not aware of any material adverse change in the financial position or trading position of the Group since December 31, 2021, being the date to which the latest published audited financial statements of the Group were made up.

8. MATERIAL CONTRACTS

The following contracts (not being contracts entered into in the ordinary course of business) have been entered into by the members of the Group within two years immediately preceding the issue of this Circular are material:

- (a) the equity purchase agreement dated November 10, 2020 entered into between the Company and Communications Group in relation to the acquisition of 30% equity interest in Zhejiang HangNing Expressway Co., Ltd.* (浙江杭寧高速公路有限責任公司) at the consideration of RMB2,685,000,000 payable by the Company;
- (b) the equity purchase agreement dated November 10, 2020 entered into between the Company and Communications Group in relation to the acquisition of the entire equity interest in Zhejiang LongLiLiLong Expressway Co., Ltd.* (浙江龍麗麗龍高速公路有限公司) at the consideration of RMB238,140,000 payable by the Company;
- (c) the equity transfer agreement dated May 7, 2021 entered into between the Company and Mr. Zhou Minghai and Mr. Shi Guoliang in relation to the acquisition of 55% equity interest in Jiaxing Zhajiasu Expressway Co., Ltd.* (嘉興市乍嘉蘇高速公路有限責任公司) at the consideration of RMB771,650,000 payable by the Company; and
- (d) the financial services agreement dated March 25, 2022 entered into between the Company and Zhejiang Communications Investment Group Finance Co., Ltd. in relation to the provision of deposit services, loan services, clearing services and other financial services to the Group by Zhejiang Communications Investment Group Finance Co., Ltd..

9. MISCELLANEOUS

- (a) The registered office of the Company is at 12/F, Block A, Dragon Century Plaza 1 Hangda Road Hangzhou City, Zhejiang Province, PRC 310007 and its principal place of business is at 5/F., No. 2, Mingzhu International Business Center, 199 Wuxing Road, Hangzhou City, Zhejiang Province, PRC 310020. Its representative office in Hong Kong is at Suite 2910, 29/F, Bank of America Tower, 12 Harcourt Road, Hong Kong.
- (b) The H share registrar and transfer office of the Company in Hong Kong is Hong Kong Registrars Limited at Room 1712-1716, 17/F, Hopewell Centre, 183 Queen's Road East, Hong Kong.
- (c) The company secretary of the Company is Mr. Tony H. Zheng. Mr. Zheng is also the Deputy General Manager of the Company. He graduated from University of California at Berkeley in 1995 with a BS degree in Civil Engineering.
- (d) This Circular has been printed in English and Chinese, in the event of inconsistency, the English version shall prevail.

10. DOCUMENTS ON DISPLAY

The following documents are available on the website of the Stock Exchange (www.hkexnews.hk) and the website of the Company (www.zjec.com.cn) for a period of not less than 14 days commencing from the date of this Circular:

- (a) the proposed Capital Increase Agreement;
- (b) the letter from the Independent Financial Adviser to the Independent Board Committee, the text of which is set out in pages 18 to 40 of this Circular;
- (c) the Shangsang Valuation Report;
- (d) the traffic study report from WB Group;
- (e) the letter from Deloitte in relation to the Shangsang Valuation report, the text of which is set out in Appendix IV to this Circular;
- (f) the letter from the Board in relation to the profit forecast, the text of which is set out in Appendix IV to this Circular; and
- (g) the written consents from the Experts referred to in the paragraph head “6. EXPERTS AND CONSENTS” in this Appendix.

NOTICE OF EXTRAORDINARY GENERAL MEETING



浙江滬杭甬高速公路股份有限公司 **ZHEJIANG EXPRESSWAY CO., LTD.**

(A joint stock limited company incorporated in the People's Republic of China with limited liability)
(Stock code: 0576)

NOTICE OF EXTRAORDINARY GENERAL MEETING

NOTICE IS HEREBY GIVEN THAT the extraordinary general meeting (the “**EGM**”) of Zhejiang Expressway Co., Ltd. (the “**Company**”) will be held at 10 a.m. on Tuesday, October 11, 2022 at 5/F, No. 2 Mingzhu International Business Center, 199 Wuxing Road, Hangzhou City, Zhejiang Province, the People's Republic of China (the “**PRC**”), for the purpose of considering and, if thought fit, passing with or without modification or amendment the following resolution:

AS ORDINARY RESOLUTION

1. “**THAT:**

- (a) the agreement (the “**Capital Increase Agreement**”) to be entered into between the Company, Communications Group, Shangsang Co and the Existing Shareholders (as defined in the circular of the Company dated September 21, 2022) (a copy of which is produced to the EGM marked “A” and initialed by the chairman of the EGM for the purpose of identification), and the terms and conditions thereof and the transactions contemplated thereunder, in particular, the proposed capital increase by Communications Group, and the implementation thereof be and are hereby approved and confirmed; and
- (b) the authorisation to any one of the directors of the Company, or any other person authorised by the board of directors of the Company from time to time, for and on behalf of the Company, among other matters, to sign, seal, execute, perfect, perform and deliver all such agreements, instruments, documents and deeds, and to do all such acts, matters and things and take all such steps as he or she or they may in his or her or their absolute discretion consider to be necessary, expedient, desirable or appropriate to give effect to and implement the Capital Increase Agreement and the transactions contemplated thereunder and all matters incidental to, ancillary to or in connection thereto, including agreeing and making any modifications, amendments, waivers, variations or extensions of the Capital Increase Agreement or the transactions contemplated thereunder be and are hereby approved, ratified and confirmed.”

By order of the Board
Zhejiang Expressway Co., Ltd.
Tony Zheng
Company Secretary

Hangzhou, PRC
September 21, 2022

NOTICE OF EXTRAORDINARY GENERAL MEETING

Notes:

1. Registration procedures for attending the EGM

- (a) Holders of H shares of the Company (“**H Shares**”) and domestic shares of the Company (“**Domestic Shares**”) intending to attend the EGM should return the reply slip for attending the EGM to the Company by post or by facsimile (address and facsimile numbers are shown in paragraph 5(b) below) such that the same shall be received by the Company on or before October 10, 2022.
- (b) A shareholder or his/her/its proxy should produce proof of identity when attending the EGM. If a corporate shareholder appoints its legal representative to attend the meeting, such legal representative shall produce proof of identity and a copy of the resolution of the board of directors or other governing body of such shareholder appointing such legal representative to attend the meeting.

2. Proxy

- (a) A shareholder eligible to attend and vote at the EGM is entitled to appoint, in written form, one or more proxies to attend and vote at the EGM on behalf of him/her/it. A proxy need not be a shareholder of the Company.
- (b) A proxy shall be appointed by a written instrument signed by the appointor or an attorney authorized by him/her/it for such purpose. If the appointor is a corporation, the same shall be affixed with the seal of such corporation, or signed by its director(s) or duly authorized representative(s). If the instrument appointing a proxy is signed by a person authorized by the appointor, the power of attorney or other authorisation document(s) shall be notarized.
- (c) To be valid, the power of attorney or other authorisation document(s) (which have been notarized) together with the completed form of proxy must be delivered, in the case of holders of Domestic Shares, to the Company at the address shown in paragraph 5(b) below and, in the case of holders of H Shares, to Hong Kong Registrars Limited at 17M Floor, Hopewell Center, 183 Queen’s Road East, Wanchai, Hong Kong, at least 24 hours before the time designated for holding of the EGM (or any adjournment thereof).
- (d) Any vote of the shareholders of the Company present in person or by proxy at the EGM must be taken by poll.

3. Book closing period

For the purpose of the EGM, the register of members holding H shares of the company will be closed from October 6, 2022 to October 11, 2022 (both days inclusive).

4. Last Day of Transfer and Record Date

Holders of H Shares who intend to attend the EGM must deliver all transfer instruments and the relevant shares certificates to Hong Kong Registrars Limited at Rooms 1712-1716, 17/F, Hopewell Center, 183 Queen’s Road East, Hong Kong, at or before 4:30 p.m. on October 5, 2022.

For the purpose of the EGM, the record date will be October 11, 2022.

NOTICE OF EXTRAORDINARY GENERAL MEETING

5. Miscellaneous

- (a) The EGM will not last for more than one day. Shareholders who attend shall bear their own traveling and accommodation expenses.
- (b) The principal place of business of the Company in the PRC is:

5/F, No. 2 Mingzhu International Business Center
199 Wuxing Road
Hangzhou City, Zhejiang Province
People's Republic of China
310020
Telephone No.: (+86)-571-8798 7700
Facsimile No.: (+86)-571-8795 0329

As at the date of this notice, the Chairman of the Company is Mr. YU Zhihong; the executive directors of the Company are: Mr. CHEN Ninghui and Mr. YUAN Yingjie; the other non-executive directors of the Company are: Mr. JIN Chaoyang, Mr. FAN Ye and Mr. HUANG Jianzhang; and the independent non-executive directors of the Company are: Mr. PEI Ker-Wei, Ms. LEE Wai Tsang, Rosa and Mr. CHEN Bin.