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| RGC Ref. No.:<br>UGC/FDS11/B02/20<br><p>(please insert ref. above)</p> |
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**RESEARCH GRANTS COUNCIL  
COMPETITIVE RESEARCH FUNDING SCHEMES FOR  
THE LOCAL SELF-FINANCING DEGREE SECTOR**

**FACULTY DEVELOPMENT SCHEME (FDS)**

**Completion Report**  
(for completed projects only)

**Submission Deadlines:**

1. Auditor's report with unspent balance, if any: within **six** months of the approved project completion date.
2. Completion report: within **12** months of the approved project completion date.

**Part A: The Project and Investigator(s)**

**1. Project Title**

Book-Tax Relationship, Tax Avoidance and IPO: Evidence from China

**2. Investigator(s) and Academic Department(s) / Unit(s) Involved**

| Research Team          | Name / Post                                | Unit / Department / Institution   |
|------------------------|--|---|
| Principal Investigator | CHAN Koon Hung<br>Professor                | Rita Tong Liu School of<br>Business and Hospitality<br>Management / Saint Francis<br>University |
| Co-Investigator(s)     | MO, Phyllis Lai Lan<br>Professor           | Department of Accountancy /<br>City University of Hong Kong                                     |
|                        | ZHANG Vivian Weiyin<br>Assistant Professor | Department of Accountancy /<br>Hang Seng University of Hong<br>Kong                             |

**3. Project Duration**

|   | Original   | Revised    | Date of RGC /<br>Institution Approval<br>(must be quoted) |
|---|------------|------------|---|
| Project Start Date                              | 01/01/2021 | 01/01/2021 |   |
| Project Completion Date                         | 31/12/2023 | 30/06/2024 | Institutional Approval<br>28-Sept-2023                    |
| Duration (in month)                             | 36         | 42         |   |
| Deadline for Submission<br>of Completion Report | 31/12/2024 | 30/06/2025 |   |

- 4.4 Please attach photo(s) of acknowledgement of RGC-funded facilities / equipment.  
N/A

## **Part B: The Final Report**

### **5. Project Objectives**

- 5.1 Objectives as per original application (slightly adjusted per the initial Project/Budget Revision, approved prior to the Start Date of the Project on 01/01/2021)

1. Investigate and compare the book-tax relationship and related corporate tax avoidance behaviors immediately before and after IPO with reference to the book-tax tradeoff theory. In addition, assess the applicability of this theory in an IPO setting.
2. Collect A-share IPO data from 2001-2009 and other relevant data.
3. Conduct statistical analysis on the relationship between the level of nonconforming/conforming tax avoidance and the level of accruals-based/real activity earnings management in the pre-IPO and the post-IPO periods.
4. Compare the magnitude of different tax avoidance (nonconforming and conforming) between the pre- and the post-IPO period. That is, determine whether there is a significant increase or decrease for different types of tax avoidance from the pre- to the post-IPO period.

The above objectives are realized through the testing of the following hypotheses:

*H1: In the pre-IPO period, more aggressive financial reporting via accruals-based earnings management will be accompanied by more aggressive book-tax difference tax avoidance. In the post-IPO period, aggressive financial reporting will constrain book-tax difference tax avoidance.*

*H2: There will be a decrease in book-tax difference tax avoidance from the pre- to the post-IPO period.*

*H3: In the pre-IPO period, more aggressive financial reporting via real activity-based earnings management (RAM) will be accompanied by a lower level of book-tax conforming tax avoidance. In the post-IPO period, RAM reversals will result in more book-tax conforming tax avoidance.*

*H4: There will be an increase in book-tax conforming tax avoidance from the pre- to the post-IPO period.*

- 5.2 Revised objectives

Date of approval from the RGC: N/A

Reasons for the change:

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### 5.3 Realisation of the objectives

*(Maximum 1 page; please state how and to what extent the project objectives have been achieved; give reasons for under-achievements and outline attempts to overcome problems, if any)*

#### Objective 1. Overall Objective

The PI and Co-I have investigated and compared the corporate tax avoidance (or compliance) behaviors immediately before versus after IPO and simultaneously assess the applicability of the book-tax tradeoff theory in the pre- and post IPO periods. We have fully achieved the overall objective of this research. See Section 6.1 for details.

#### Objective 2. Data Collection

We draw our sample of all Chinese A-share IPO firms between January 2002 and December 2019 from the CSMAR database. We start the sample period from 2002 because pre-IPO financial data are not available before 2002. We stop at 2019 to avoid having the confounding effect of the COVID\_19 and the associated lockdowns in China which affect business, as well as the 2020 Securities Law Reform in China. We obtain statutory tax rates from the WIND Economic database. For more details, please refer to the paper attached.

#### Objectives 3 and 4. Conduct Statistical Analysis and Compare the Magnitudes of Tax Avoidance before vs. after IPO

Statistical analyses were conducted to test ALL four hypotheses above via multiple regression analysis. Key regression variables are measured as follows: For Hypotheses 1 and 2, accrual-based earnings management is based on the cross-sectional modified Jones model with additional control for performance (Kothari et al. 2005). Book-tax difference (i.e., non-conforming) tax avoidance is measured by different forms of effective tax rates adjusted by the applicable statutory tax rates (Hanlon and Heitzman 2010). For Hypotheses 3 and 4, real activities earnings management (RAM) is measured by the sum of abnormal cash flows from operating activities, abnormal discretionary expenses and abnormal production costs (Cohen et al. 2008; Roychowdhury 2006). Book-tax conforming tax avoidance is based on the method suggested by Badertscher et al. (2019) and Xiao and Shao (2020).

Sensitivity analyses were performed by varying the definition of all the above-mentioned main regression variables. Additional analyses were performed using Propensity Score Matching (PSM) and difference-in-difference analysis to alleviate endogeneity concerns. Seemingly Unrelated Regression (SUR) was also used to account for potential interdependence between the two forms of tax avoidance. For more details on the Research Methodology used to realize the Project Objectives, please refer to the paper attached to this Report.

#### References:

- Badertscher, B. A., S. P. Kats, S. O. Rego, and R. J. Wilson. 2019. Conforming tax avoidance and capital market pressure. *The Accounting Review* 94(6): 1-30.
- Cohen D. A., A. D. Dey, and T. Z. Lys. 2008. Real and accrual-based earnings management in the pre- and post-Sarbanes-Oxley periods. *The Accounting Review* 83 (3): 757–787.
- Hanlon, M., and S. Heitzman. 2010. A review of tax research. *Journal of Accounting and Economics* 50: 127-178.
- Kothari, S. P., A. J. Leone, and C. E. Wasley. 2005. Performance matched discretionary accrual measures. *Journal of Accounting and Economics* 39 (1): 163–197.
- Roychowdhury, S. 2006. Earnings management through real activities manipulation. *Journal of Accounting and Economics* 42 (3): 335-370.
- Xiao, C., and Y. Shao. 2020. Information system and corporate income tax enforcement: Evidence from China. *Journal of Accounting and Public Policy* 39: 106772.

## 5.4 Summary of objectives addressed to date

| <b>Objectives</b><br><i>(as per 5.1/5.2 above)</i>  | <b>Addressed</b><br><i>(please tick)</i> | <b>Percentage Achieved</b><br><i>(please estimate)</i> |
|---|--|--|
| 1. Investigate and compare the book-tax relationship before and after IPO                 | ✓  | 100%   |
| 2. Collect relevant data  | ✓  | 100%   |
| 3. Conduct statistical analyses   | ✓  | 100%   |
| 4. Compare magnitude of taxa avoidance to determine changes from pre- to post- IPO period | ✓  | 100%   |

## 6. Research Outcome

### 6.1 Major findings and research outcome

(Maximum 1 page; please make reference to Part C where necessary)

We are able to empirically confirm all our hypotheses. That is, we find that in the pre-IPO period, more aggressive financial reporting via accrued earnings management is accompanied by more aggressive book-tax-difference (i.e., non-conforming) tax avoidance. This confirms the obfuscation theory of Balakrishnan et al. (2019) and Frank et al. (2009), as both earnings management and tax avoidance are engendered by a secretive non-transparent corporate environment. We also find that in the post-IPO period, such aggressive financial reporting constrains book-tax-difference (BTD) tax avoidance, thus confirming the book-tax tradeoff theory that firms cannot costlessly inflate book income and simultaneously manage taxable income downward (Mills and Newberry 2001; Chan et al. 2010; Lin et al. 2014; Chan et al. 2023). As a result, there is a decrease in BTD tax avoidance from the pre- to the post-IPO period.

Conversely, we find that in the pre-IPO period, aggressive financial reporting via real activity-based earnings management (RAM) is accompanied by a lower level of book-tax conforming (BTC) tax avoidance and RAM reversals in the post-IPO period result in more book-tax conforming tax avoidance. There is therefore an increase in BTC tax avoidance from the pre- to the post-IPO period.

A series of sensitivity tests and additional analyses help alleviate methodological concerns and strengthen the findings. For details of the institutional reasons underpinning the above results, please refer to the paper attached.

#### References:

- Balakrishnan, K., J. L. Blouin, and W. R. Guay. 2019. Tax aggressiveness and corporate transparency. *The Accounting Review* 94(1): 45-69.
- Chan, K. H., K. Z. Lin, and P. L. L. Mo. 2010. Will a departure from tax-based accounting encourage tax noncompliance? Archival evidence from a transition economy. *Journal of Accounting and Economics* 50 (1): 58–73.
- Chan, K. H., K., Lin, P. L. L. Mo, and P. Wong. 2023. Does IFRS convergence improve earnings informativeness? An analysis from the book-tax tradeoff perspective. *Accounting and Business Research* 53(2): 158-184.
- Frank, M. M., L. J. Lynch, and S. O. Rego. 2009. Tax reporting aggressiveness and its relation to aggressive financial reporting. *The Accounting Review* 84 (2): 467-496.
- Lin, K. Z., L. F. Mills, and F. Zhang. 2014. Public versus private firm responses to the tax rate reduction in China. *Journal of the American Taxation Association* 36 (1): 137-163.
- Mills, L. F., and K. L. Newberry. 2001. The influence of tax and nontax costs on book- tax reporting differences: public and private firms. *Journal of the American Taxation Association* 23 (1): 1– 19.

## 6.2 Potential for further development of the research and the proposed course of action (*Maximum half a page*)

This research helps settle the issue on the applicability of two competing theories, the obfuscation theory (i.e., two devils, namely earning management and tax avoidance, dance together) and the book-tax tradeoff theory (i.e., two devils constrain each other) in an IPO setting. Future research can further test these competing theories in different business settings such as mergers and acquisitions.

From a more practical perspective, the results can help auditors, regulators and investors better understand, predict and assess important reporting behaviors by corporate management. An “easier to understand” version of the attached paper was presented in a conference attended by practitioners and researchers to confirm the practical significance of the results.

The final paper is currently under review in a leading research journal in Accountancy.

## 7. Layman’s Summary

(*Describe in layman’s language the nature, significance and value of the research project, in no more than 200 words*)

Going public enhances the transparency of a company with increased social responsibilities. Tax avoidance is a significant problem for Initial Public Offering (IPO) firms and understanding its implications is important for investors and other capital market stakeholders. Anecdotal evidence from China confirms the seriousness of tax avoidance by IPO firms for investors, in part because of the potential tax liability that shareholders of the newly issued shares (i.e., new investors) may have. For example, in one instance, shareholders of the newly issued shares became “scapegoats” for pre-IPO overdue taxes and had to pay the taxes for the original shareholders.

Therefore, by better identifying the nature, likely magnitude, and timing of the tax avoidance behaviors related to IPO firms, capital market stakeholders will be capable of making more informed decisions. However, research on IPO-related tax reporting issues is relatively scarce. This research fills this gap in the literature. The research results provide new insights into firms’ tax avoidance behaviors as they relate to the IPO process. From an academic perspective, the research tests the applicability of the book-tax tradeoff theory (and the related obfuscation theory) in an IPO context.

**Part C: Research Output****8. Peer-Reviewed Journal Publication(s) Arising Directly From This Research Project**

*(Please attach a copy of the publication and/or the letter of acceptance if not yet submitted in the previous progress report(s). All listed publications must acknowledge RGC's funding support by quoting the specific grant reference.)*

| The Latest Status of Publications |  |              |                                 | Author(s)<br>(denote the corresponding author with an asterisk*) | Title and Journal / Book<br>(with the volume, pages and other necessary publishing details specified)                    | Submitted to RGC<br>(indicate the year ending of the relevant progress report) | Attached to this Report<br>(Yes or No) | Acknowledged the Support of RGC<br>(Yes or No) | Accessible from the Institutional Repository<br>(Yes or No) |
|-----------------------------------|--|--------------|---------------------------------|--|--|--|--|--|---|
| Year of Publication               | Year of Acceptance<br>(For paper accepted but not yet published) | Under Review | Under Preparation<br>(optional) |  |  |  |  |  |   |
|                                   |  | ✓            |                                 | Koon Hung Chan, Phyllis Mo, Vivian Zhang*                        | IPO, Book-Tax Relationships and Tax Avoidance: Evidence from China<br><br>(Under review in a leading accounting journal) | N/A  | Yes                                    | Yes  | Not yet   |
|                                   |  |              |                                 |  |  |  |  |  |   |

**9. Recognized International Conference(s) In Which Paper(s) Related To This Research Project Was / Were Delivered**

*(Please attach a copy of each conference abstract)*

| Month / Year / Place     | Title  | Conference Name   | Submitted to RGC<br>(indicate the year ending of the relevant progress report) | Attached to this Report<br>(Yes or No)  | Acknowledged the Support of RGC<br>(Yes or No) | Accessible from the Institutional Repository<br>(Yes or No) |
|--------------------------|--|---|--|---|--|---|
| December 2022/<br>Online | Book-Tax Relationships and IPOs: Evidence from China | 2022 Academy of International Business (Asia Pacific) Conference, attended by practitioners and researchers | Yes, Abstract submitted in March 2022  | A much more updated version of the paper is attached to this report. See Part C8 above. | Yes  | Yes, Abstract (from conference organizer)                   |
|                          |  |   |  |   |  |   |

# 10. Whether Research Experience And New Knowledge Has Been Transferred / Has Contributed To Teaching And Learning

*(Please elaborate)*

The PI is the Coordinator of a two-semester BBA course “Business Research Project” which is a graduation requirement for business students at Saint Francis University (SFU). This research helps inspire students on research in taxation and accounting (financial reporting). In addition, this research was presented at the Academy of International Business Conference attended by practitioners and researchers in December 2022. The PI is also the Coordinator of a graduate course “Research Project in Corporate Governance” in SFU’s Master of Corporate Governance Program which will also be benefited by this research. Similarly, for the Co-Is, the research experience from this project enhances their teachings for taxation and financial accounting courses in their respective institutions.

# 11. Student(s) Trained

*(Please attach a copy of the title page of the thesis)*

| Name | Degree Registered for         | Date of Registration | Date of Thesis Submission / Graduation |
|------|-------------------------------|----------------------|--|
|      | Please see explanation above. |                      |  |

# 12. Other Impact

*(e.g. award of patents or prizes, collaboration with other research institutions, technology transfer, teaching enhancement, etc.)*

This research project involves and enhances collaborations among self-financed and UGC funded institutions in Hong Kong. It deepens our knowledge on taxation, financial reporting, and IPO issues which will enhance the quality of our teaching in the relevant areas.

# 13. Statistics on Research Outputs

|  | Peer-reviewed Journal Publications | Conference Papers | Scholarly Books, Monographs and Chapters | Patents Awarded | Other Research Outputs (please specify) |     |
|--|------------------------------------|-------------------|--|-----------------|---|-----|
| No. of outputs arising directly from this research project | 1<br>(under review)                | 1                 |  |                 | Type                                    | No. |
|  |                                    |                   |  |                 |   |     |

# 14. Public Access Of Completion Report

*(Please specify the information, if any, that cannot be provided for public access and give the reasons.)*

| Information that Cannot Be Provided for Public Access | Reasons |
|---|---------|
|   |         |