

November 14, 2025 - (Vol. IX, No. 108)

When is 0% an impressive score?

By Warren Lovely

Analysts and investors are fond of using various 'scorecard' metrics to gauge/assess performance and/or opportunities. There's an abundance of statistical measures and approaches to choose from, many with specific pros and cons. The 'best' or most useful metric will ultimately depend on the subject matter and what one is really trying to isolate for.

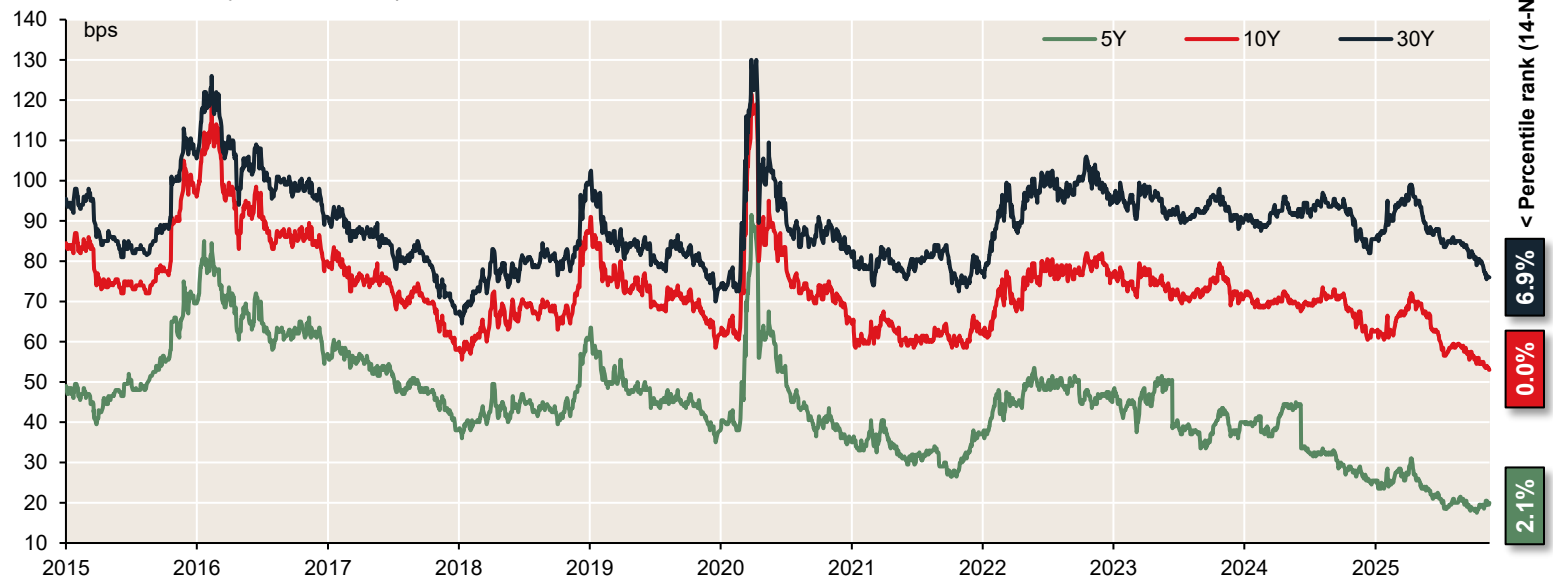
As but one example... using 'percentiles' is a common enough approach when looking to position a prevailing level within an historical or cross-sectional sample. A 'percentile' score is hardly the most sophisticated

approach out there. Still, for anyone that went to school and worried about how they stacked up vs. their peers, a 'percentile' will be familiar enough. And unlike in uni, sometimes an ultra-low 'percentile' signifies relative strength.

Which brings us to the provincial government bond market. And in answer to the question: **'When is 0% a genuinely impressive score?'** The answer is: **'When applying percentiles to provincial government domestic bond spreads vs. the govi curve.'**

Chart 1: Putting provincial spreads in context, with 0% 'percentile' for Ontario 10s signifying extraordinary ground

Ontario constant maturity domestic bond spreads vs. GoC curve

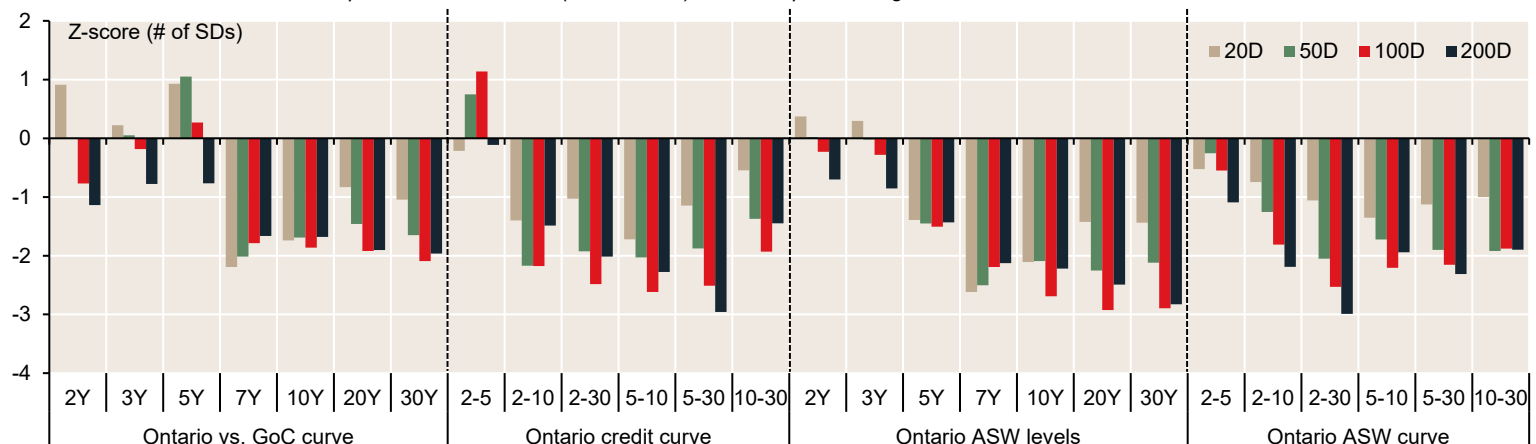


Source: NBC | Note: Daily indications to 14-Nov-25; percentile rank based on latest spread vs. historical record (over 10 years or >2,600 observations)

0.0%. That's the percentile rank for Ontario's 10-year constant maturity spread vs. the GoC curve looking back over more than a decade. Put another way, since 2015 we've not seen a tighter cash spread than today's +53bps. Spreads are relatively snug across the curve. Ontario 5s have been tighter only 2.1% of the time. Just 6.9% of the time have longs been inside today's +76bps.

Chart 2: If percentiles aren't your thing, Z-scores (measuring relative deviation from mean) provide alternative RV lens

Z-scores for Ontario domestic bond spreads & credit curves (cash & ASW) relative to prior averages: As of 14-Nov-25

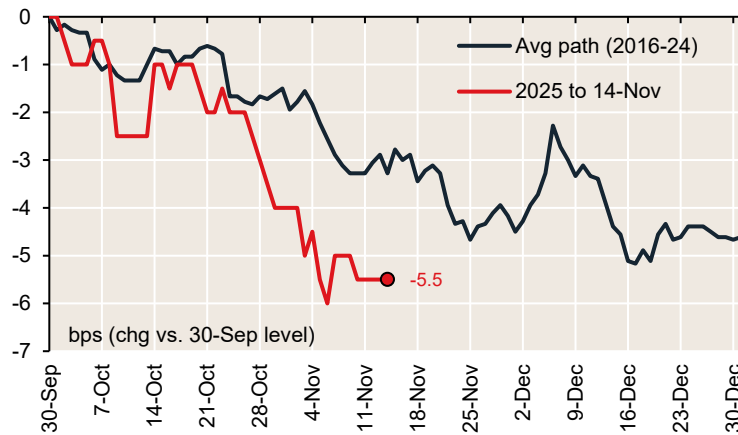


Source: NBC | Note: Z-score calculation: $(\text{current value} - \text{mean}_p) / \text{standard deviation}_p$, where 'p' denotes a period of time (in this case 20 to 200 trading days)

Percentiles are but one way to measure relative standing; Z-scores are another. Chart 2 presents Z-scores for more recent samples (i.e., the past 20 to 200 trading days). A similar theme is apparent here, one of relative strength/tightness in provincial bond markets (whether measured vs. GoC or vs. OIS). Currently, Ontario 10s are nearly 2 standard deviations inside of various period means.

**Chart 3: Spread seasonality respected in 2025 (and then some)**

Ontario 30Y spread vs. GoC curve indexed to end of Q3: 2025 vs. prior average

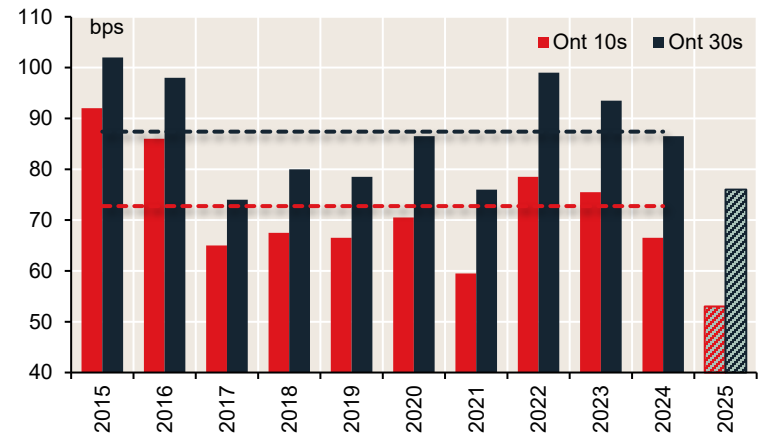


Source: NBC | Note: Daily indications for Q4 only; relative to 30-Sep level/avg which is set to 0

In normal times, no quarter tends to be kinder to provincial spreads than Q4. 'Spread seasonality' has been respected in 2025 and then some. Consider: Ontario 30s have tightened 5.5 bps vs. September's closing level, a larger-than-average move and extending the already impressive success rate for investors betting on spread performance in cash markets this time of year.

Chart 4: 'G' spreads dip into unusual territory

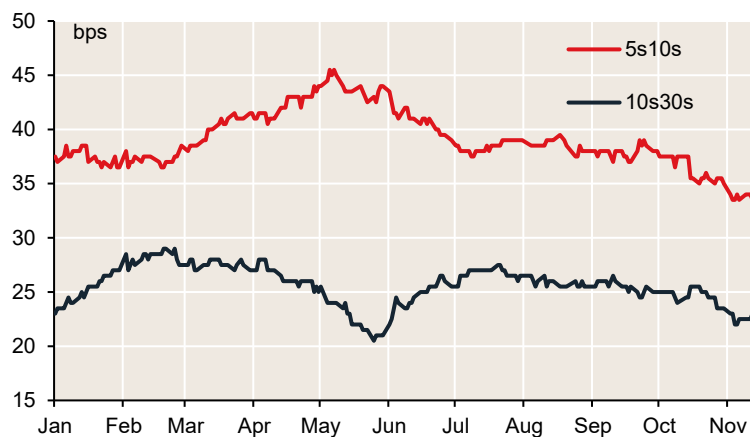
Ontario 10y & 30Y spread vs. GoC curve as of 14-Nov: 2025 vs. prior years



Source: NBC | Note: For all years, levels refer to 14-Nov; dotted line is prior 10Y avg

Chart 5: Bending credit curves

Ontario 5s10s & 10s30s credit curves: 2025YTD

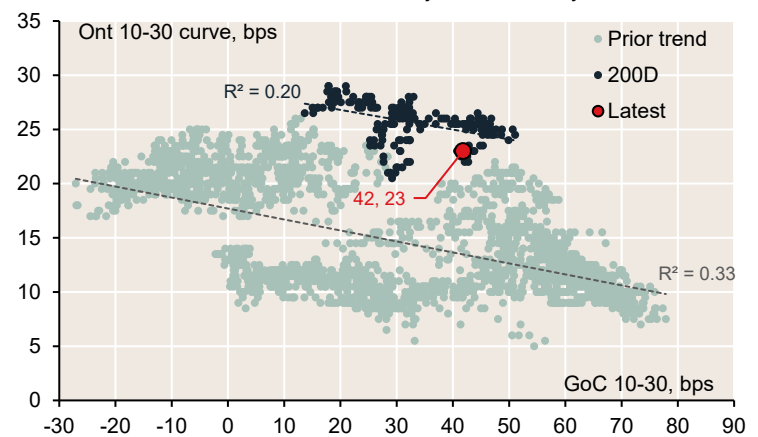


Source: NBC | Note: Based on daily indications to 14-Nov

Beyond understandable interest in GoC curve dynamics in/around December 1st, provincial curve dynamics bear scrutiny. Ontario 10s have recently performed on the curve, arresting a grind flatter in 10s30s. Provincial funding programs may be well advanced, but seasonal demand for duration is likely to be issued into, early December traditionally the single busiest supply window of the year.

Chart 6: 10s30s in focus as December 1st/2nd approaches

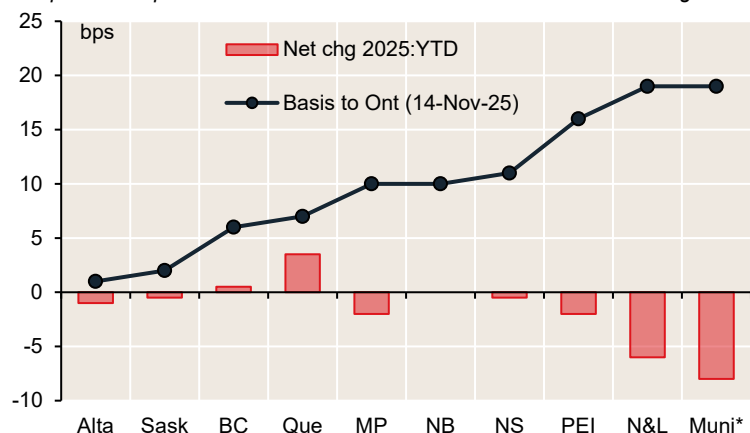
Ontario 10s30s credit curve vs. GoC 10s30s yield curve: Daily from 2015



Source: NBC | Note: Based on >2,600 daily observations from Jan-15; latest is 14-Nov-25

Chart 7: Relative relationships re-priced in provi land

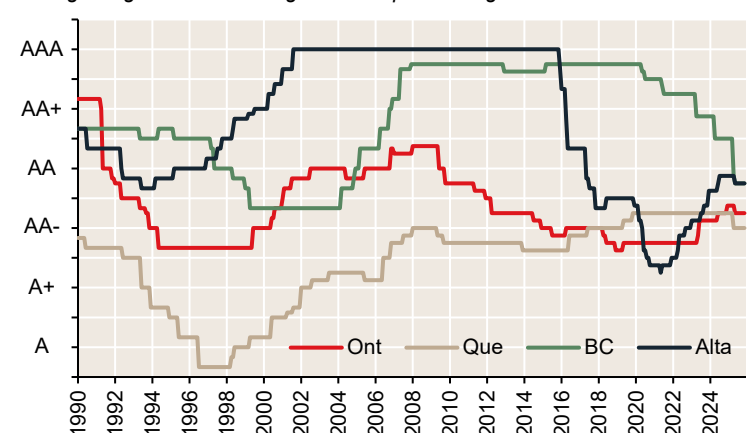
30Y provincial spreads relative to Ontario: Current level & 2025YTD change



Source: NBC | Note: Based on daily indications; muni is representative AAA-rated Ont credit

Chart 8: Some provincial credit ratings adjusted

Average long-term credit rating for select provincial governments



Source: NBC, S&P, Moody's, DBRS, Fitch | Note: Monthly to Nov-25; controls for outlook

The re-pricing (read richening) of provincial credit to the notional 'risk free' curve makes fundamental and technical sense. Line Ontario's recent fall statement up against the fresh federal budget, as we did [here](#), and there's a compelling argument for sustained tight 'G' spreads. There's likewise been material adjustment in where provinces trade one to other. Among other things, shifting basis spreads across the provincial complex can reflect investor perceptions on economic, fiscal, political, rating and supply risks, with liquidity long an important consideration for provincial bond investors.



Economics and Strategy

Subscribe to our publications:

NBC.EconomicsStrategy@nbc.ca

To contact us:

514-879-2529

Stéfane Marion

Chief Economist and Strategist

stefane.marion@nbc.ca

Matthieu Arseneau

Deputy Chief Economist

matthieu.arseneau@nbc.ca

Jocelyn Paquet

Senior Economist

jocelyn.paquet@nbc.ca

Kyle Dahms

Senior Economist

kyle.dahms@nbc.ca

Alexandra Ducharme

Senior Economist

alexandra.ducharme@nbc.ca

Daren King, CFA

Senior Economist

daren.king@nbc.ca

Warren Lovely

Chief Rates and Public Sector Strategist

warren.lovely@nbc.ca

Taylor Schleich

Rates Strategist

taylor.schleich@nbc.ca

Ethan Currie

Strategist

ethan.currie@nbc.ca

Angelo Katsoras

Geopolitical Analyst

angelo.katsoras@nbc.ca

Nathalie Girard

Senior Coordinator

n.girard@nbc.ca

Giuseppe Saltarelli

Desktop Publisher

giuseppe.saltarelli@nbc.ca

General: This Report was prepared by National Bank Financial, Inc. (NBF), (a Canadian investment dealer, member of CIRO), an indirect wholly owned subsidiary of National Bank of Canada. National Bank of Canada is a public company listed on the Toronto Stock Exchange.

The particulars contained herein were obtained from sources which we believe to be reliable but are not guaranteed by us and may be incomplete and may be subject to change without notice. The information is current as of the date of this document. Neither the author nor NBF assumes any obligation to update the information or advise on further developments relating to the topics or securities discussed. The opinions expressed are based upon the author(s) analysis and interpretation of these particulars and are not to be construed as a solicitation or offer to buy or sell the securities mentioned herein, and nothing in this Report constitutes a representation that any investment strategy or recommendation contained herein is suitable or appropriate to a recipient's individual circumstances. In all cases, investors should conduct their own investigation and analysis of such information before taking or omitting to take any action in relation to securities or markets that are analyzed in this Report. The Report alone is not intended to form the basis for an investment decision, or to replace any due diligence or analytical work required by you in making an investment decision.

This Report is for distribution only under such circumstances as may be permitted by applicable law. This Report is not directed at you if NBF or any affiliate distributing this Report is prohibited or restricted by any legislation or regulation in any jurisdiction from making it available to you. You should satisfy yourself before reading it that NBF is permitted to provide this Report to you under relevant legislation and regulations.

National Bank of Canada Financial Markets is a trade name used by National Bank Financial and National Bank of Canada Financial Inc.

Canadian Residents: NBF or its affiliates may engage in any trading strategies described herein for their own account or on a discretionary basis on behalf of certain clients and as market conditions change, may amend or change investment strategy including full and complete divestment. The trading interests of NBF and its affiliates may also be contrary to any opinions expressed in this Report.

NBF or its affiliates often act as financial advisor, agent or underwriter for certain issuers mentioned herein and may receive remuneration for its services. As well NBF and its affiliates and/or their officers, directors, representatives, associates, may have a position in the securities mentioned herein and may make purchases and/or sales of these securities from time to time in the open market or otherwise. NBF and its affiliates may make a market in securities mentioned in this Report. This Report may not be independent of the proprietary interests of NBF and its affiliates.

This Report is not considered a research product under Canadian law and regulation, and consequently is not governed by Canadian rules applicable to the publication and distribution of research Reports, including relevant restrictions or disclosures required to be included in research Reports.

UK Residents: This Report is a marketing document. This Report has not been prepared in accordance with EU legal requirements designed to promote the independence of investment research and it is not subject to any prohibition on dealing ahead of the dissemination of investment research. In respect of the distribution of this Report to UK residents, NBF has approved the contents (including, where necessary, for the purposes of Section 21(1) of the Financial Services and Markets Act 2000). This Report is for information purposes only and does not constitute a personal recommendation, or investment, legal or tax advice. NBF and/or its parent and/or any companies within or affiliates of the National Bank of Canada group and/or any of their directors, officers and employees may have or may have had interests or long or short positions in, and may at any time make purchases and/or sales as principal or agent, or may act or may have acted as market maker in the relevant investments or related investments discussed in this Report, or may act or have acted as investment and/or commercial banker with respect hereto. The value of investments, and the income derived from them, can go down as well as up and you may not get back the amount invested. Past performance is not a guide to future performance. If an investment is denominated in a foreign currency, rates of exchange may have an adverse effect on the value of the investment. Investments which are illiquid may be difficult to sell or realise; it may also be difficult to obtain reliable information about their value or the extent of the risks to which they are exposed. Certain transactions, including those involving futures, swaps, and other derivatives, give rise to substantial risk and are not suitable for all investors. The investments contained in this Report are not available to retail customers and this Report is not for distribution to retail clients (within the meaning of the rules of the Financial Conduct Authority). Persons who are retail clients should not act or rely upon the information in this Report. This Report does not constitute or form part of any offer for sale or subscription of or solicitation of any offer to buy or subscribe for the securities described herein nor shall it or any part of it form the basis of or be relied on in connection with any contract or commitment whatsoever.

This information is only for distribution to Eligible Counterparties and Professional Clients in the United Kingdom within the meaning of the rules of the Financial Conduct Authority. NBF is authorised and regulated by the Financial Conduct Authority and has its registered office at 70 St. Mary Axe, London, EC3A 8BE.

NBF is not authorised by the Prudential Regulation Authority and the Financial Conduct Authority to accept deposits in the United Kingdom.

EU Residents: With respect to the distribution of this report in the member states of the European Union ("EU") and the European Economic Area ("EEA") by NBC Paris, the contents of this report are for information purposes only and do not constitute investment advice, investment research, financial analysis or other forms of general recommendation relating to transactions in financial instruments within the meaning of Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 ("MiFID 2"). This report is intended only for professional investors and eligible counterparties within the meaning of MiFID 2 and its contents have not been reviewed or approved by any EU/EEA authority. NBC Paris is an investment firm authorised by the French Prudential Control and Resolution Authority ("ACPR") to provide investment services in France and has passported its investment services throughout the EU/EEA under the freedom to provide services and has its registered office at 8 avenue Percier, 75008 Paris, France. "NBC Financial Markets, a subsidiary of National Bank of Canada" is a trade name used by NBC Paris S.A.

NBF is not authorised to provide investment services in the EU/EEA.

U.S. Residents: With respect to the distribution of this report in the United States of America, National Bank of Canada Financial Inc. ("NBCFI") which is regulated by the Financial Industry Regulatory Authority (FINRA) and a member of the Securities Investor Protection Corporation (SIPC), an affiliate of NBF, accepts responsibility for its contents, subject to any terms set out above. To make further inquiry related to this report, or to effect any transaction, United States residents should contact their NBCFI registered representative.

This report is not a research report and is intended for Major U.S. Institutional Investors only. This report is not subject to U.S. independence and disclosure standards applicable to research reports.

HK Residents: With respect to the distribution of this report in Hong Kong by NBC Financial Markets Asia Limited ("NBCFMA") which is licensed by the Securities and Futures Commission ("SFC") to conduct Type 1 (dealing in securities) and Type 3 (leveraged foreign exchange trading) regulated activities, the contents of this report are solely for informational purposes. It has not been approved by, reviewed by, verified by or filed with any regulator in Hong Kong. Nothing herein is a recommendation, advice, offer or solicitation to buy or sell a product or service, nor an official confirmation of any transaction. None of the products issuers, NBCFMA or its affiliates or other persons or entities named herein are obliged to notify you of changes to any information and none of the foregoing assume any loss suffered by you in reliance of such information.

The content of this report may contain information about investment products which are not authorized by SFC for offering to the public in Hong Kong and such information will only be available to, those persons who are Professional Investors (as defined in the Securities and Futures Ordinance of Hong Kong ("SFO")). If you are in any doubt as to your status you should consult a financial adviser or contact us. This material is not meant to be marketing materials and is not intended for public distribution. Please note that neither this material nor the product referred to is authorized for sale by SFC. Please refer to product prospectus for full details.

There may be conflicts of interest relating to NBCFMA or its affiliates' businesses. These activities and interests include potential multiple advisory, transactional and financial and other interests in securities and instruments that may be purchased or sold by NBCFMA or its affiliates, or in other investment vehicles which are managed by NBCFMA or its affiliates that may purchase or sell such securities and instruments.

No other entity within the National Bank of Canada group, including National Bank of Canada and National Bank Financial Inc, is licensed or registered with the SFC. Accordingly, such entities and their employees are not permitted and do not intend to: (i) carry on a business in any regulated activity in Hong Kong; (ii) hold themselves out as carrying on a business in any regulated activity in Hong Kong; or (iii) actively market their services to the Hong Kong public.

Copyright: This Report may not be reproduced in whole or in part, or further distributed or published or referred to in any manner whatsoever, nor may the information, opinions or conclusions contained in it be referred to without in each case the prior express written consent of NBF.