



Asian credits: the rising importance of governance factors

Q4 2020



Overview

The COVID-19 pandemic has roiled global asset markets, including those in Asia. In this difficult economic environment, the region will not be immune to the general trend of credit deterioration.

Nevertheless, we believe Asia is structurally better positioned than its global counterparts and, in our view, there are significant opportunities available for investors in credit selection. To fully extract value, incorporating a robust environmental, social, and governance (ESG) analysis—and particularly the "G" factor (governance) in Asia—will be increasingly integral in this difficult climate.

In this latest issue of *Portfolio Insight*, we explore the Asian credit environment and the growing importance of governance factors in credit selection. We demonstrate how Manulife Investment Management is well-placed to help investors add value in Asian credits—not just through our people and process, but also through our fully-integrated ESG approach. In fact, we have avoided all 61 fallen angels in Asia (ex-Japan) to date and have not registered a single default in our regional pan-Asian fixed-income holdings over the past 12 years.¹

Finally, through three illustrative case studies, we demonstrate how our proven approach to credit selection and emphasis on governance issues have steered us away from potentially problematic names.

¹ Manulife Investment Management, Standard & Poor's, Moody's, J.P. Morgan Asia Credit Index (JACI).

P04

The current Asian credits landscape

- Over the next few years, security selection will become critical as credit rating downgrades and defaults proliferate. We believe ESG considerations, particularly the "G" analysis (governance) in Asia, will be increasingly important in this difficult pandemic and post-pandemic economic environment.
- In our view, the most significant opportunities in Asia lie in credit selection, as credit
 quality remains comparatively high, while corporates generally benefit from a broad
 array of diversified funding channels. In this section, we share our observations on
 key developments in the credit markets of China, Indonesia, and India.

P08

The Manulife Investment Management difference: our people, our process and a targeted ESG focus

- We have an impressive track record: We have avoided all 61 fallen angels—which is when Moody's or Standard & Poor's downgrades an issuer to below investment grade—that occurred in Asia (ex-Japan) and have not registered a single default in our regional pan-Asian fixed-income holdings over the past 12 years.¹ This is a result of our commitment as active managers to safeguard investors from potential capital loss and credit write-offs through a rigorous investment process and an unwavering focus on governance issues.
- The unique combination of art (our diversity of experienced analysts across the region, language ability, and local on-the-ground familiarity) and science (our technical knowledge, deep expertise, and ESG framework) drives Manulife Investment Management's strong track record in credit selection.

P12

How emphasis on the "G" in ESG is critical in Asia

- Quite often, qualitative factors in assessing Asian credits are overlooked. We believe
 that a more holistic credit assessment framework, one that integrates both quantitative
 and qualitative factors, is critical, as there should be no room for doubt when assessing
 Asian credits.
- In this section, we detail two atypical factors that are often picked up by our multifaceted due diligence process: (1) lack of formal governance structures, and (2) related entities and transactions.

P14

Case studies: our track record underscores a robust ESG process

 In this section, we illustrate how, by integrating a robust ESG process into our credit selection, Manulife Investment Management's Asian fixed-income team has effectively steered away from credit problems arising from three well-known names.

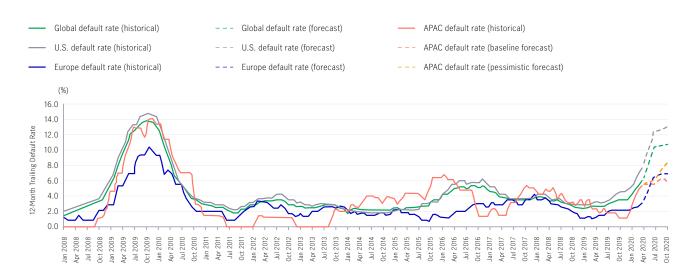
The current Asian credits landscape

The arrival of the COVID-19 pandemic has not only caused significant human loss but also roiled global asset markets, leading to significant volatility and dramatic drawdowns. Unprecedented fiscal and monetary stimulus, coupled with virus containment measures, have since somewhat stabilised markets. Nevertheless, individuals and corporates alike are still adapting and settling in to this new normal.

Global credit markets, particularly developed markets, have been hard hit by the downturn. Through the first half of 2020, the third-highest year-to-date number of fallen angels (34) and second-highest-rated debt volume (US\$323.1 billion) were recorded, primarily in the United States and the EMEA.² We believe that Asia will not be immune to the general trend of credit deterioration; rating downgrades and defaults are expected to rise gradually over the next two years, although at—likely—a relatively lower level than other regions.³ The risk of fallen angels in Asia, although present, should also be more subdued relative to global levels.⁴ The impact on credit fundamentals of Asian issuers should start to emerge, and we may see a gradual uptick in rating downgrades and defaults in the later part of this year and into 2021.

Still, it's important to note that the defaults will be gradual, or potentially deferred, due to the active easing measures introduced by governments and state-owned banks. These include forbearance programmes and extended grace periods, as well as increased liquidity injections into financial systems to ease stress.

High-yield default rate (January 2008-June 2020)



Source: Moody's Investors Service, June 2020.

² Standard & Poor's, as of June 30, 2020. Fallen angels were concentrated in the automotive, oil and gas, and transportation sectors.

³ Moody's baseline scenario predicts a trailing 12-month Asia-Pacific (APAC) high-yield nonfinancial corporate default rate of 6.0% in 2020, up from 1.1% in 2019.

⁴ Standard & Poor's, as of June 30, 2020. APAC only recorded one fallen angel through the first half of 2020.

In this rapidly evolving environment, we believe that the most significant opportunities in Asia lie in credit selection. For one, the region should be better positioned than its global peers, as credit quality is high, while corporates benefit from a broad array of diversified funding channels, ranging from local banks to bond markets.

Here's what we have observed in the key Asian markets of China, Indonesia, and India so far in 2020.

China: increasing divergence in credit quality

We believe that credit quality in the Chinese bond market is diverging, with stronger corporates still having the ability to rely on state support, while less robust names may default. Even then, some reasonably healthy companies may still see challenges with onshore bond issuance, given that their debt is now trading at roughly double-digit yields. This is particularly true for the property sector, where the tightening of the onshore bond markets—coupled with the People's Bank of China's efforts to limit debt levels in the property sector—may put further stress on developers with high leverage and high refinancing risks.⁵

With a high number of bonds maturing next year, many firms are also facing a considerable maturity wall that might challenge their ability to secure funding. As a result, we may potentially see an increase in credit events as more companies try to restructure their bonds in a challenging environment.

Nevertheless, given the Chinese government's firm control over the financial system, it can direct stimulus into different sectors of the economy. Signs are pointing toward the authorities targeting support at areas that will primarily benefit key government goals.

For example, the government has redirected some support away from the property sector toward areas that are facing growing challenges, including renewables, infrastructure, and manufacturing.

Indonesia: high yields under pressure

In Indonesia, tough economic conditions have put the high-yield market under pressure, with marginal names most likely to see distress. Notably, B- and CCC-rated property developers have been downgraded further, mainly due to refinancing concerns.

Furthermore, Indonesian banks are having challenges providing support to some high-yield credits. For companies, this inability to refinance through normal financing channels adds pressure. This contrasts with China, where there is a greater level of support in the local loan market for distressed names.

Before the pandemic, we had raised the issue of refinancing concerns with some key names. But with the new challenges brought along by the pandemic, these companies will be pushed to adopt a more focused approach to corporate governance and risk management.

In all, the challenging operating environment has led to refinancing difficulties of certain high-yield credits, and we expect higher default rates in the market going into 2021, given the debt maturity profile of many issuers.

India: a cautious outlook ahead

Meanwhile, the credit situation in India remains fluid as the government and corporations deal with the fallout of COVID-19. We have certainly seen non-bank financial companies (NBFCs) face persistent liquidity issues—still, the Reserve Bank of India has been cutting rates and using an array of unconventional monetary tools to inject liquidity into the credit market.

Indeed, many NBFCs have access to onshore bonds, and the bank loan market has improved considerably. That said, some businesses with fundamentally weak corporate governance controls will still see a challenging outlook ahead.

People's Bank of China, August 23, 2020, http://www.pbc.gov.cn/goutongjiaoliu/113456/113469/4075935/index.html.

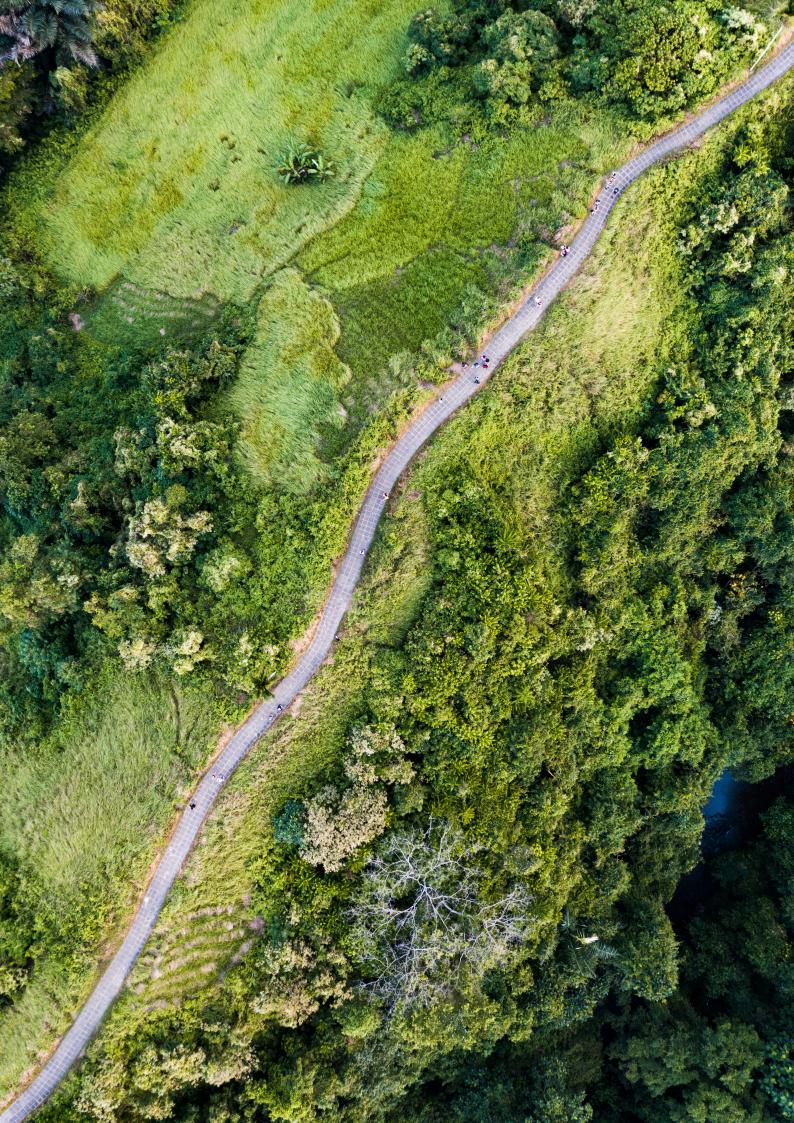
On a macro level, with concerns over slower growth, coupled with a higher fiscal deficit, we believe India has limited headroom to cushion further downturns. Still, the country boasts several positives—such as a relatively low reliance on external funding and a possible narrowing of current account deficit this year (due to improving trade terms on lower oil prices).

Depending on whether the government meets growth and debt targets, as well as the stance of credit-rating agencies, India sovereign and quasisovereign ratings could be exposed to fallen angel risk. Given India's latest borderline investment-grade rating, we are monitoring this situation closely.

Governance issues are rising in importance

One thing is clear from our observations in Asia's credit markets: As the global economy enters a rough patch, which is expected to last over the next few years, security selection will become critical as credit-rating downgrades and defaults proliferate. ESG considerations, particularly the "G" analysis in Asia, will be increasingly important in this difficult environment.

In the next two sections, we examine how Manulife Investment Management is well placed to help investors add value in Asian credits—not just through our people and process, but also through our fully integrated ESG approach.



The Manulife Investment Management difference: our people, our process, and a targeted ESG focus

Strong credit selection is an integral part of any successful Asian fixed-income strategy. More than just identifying the right securities, it's also about knowing which propositions to avoid.

Manulife Investment Management's strength and track record in the asset class have bolstered our ability to create value for investors.

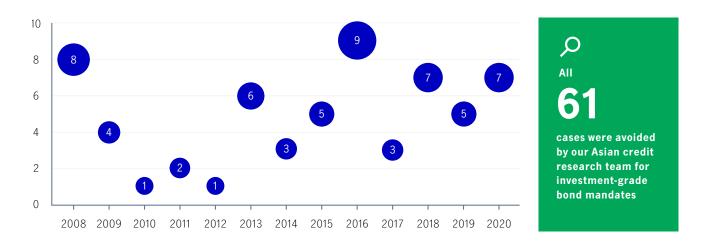
At the heart of our credit selection is a highly experienced analyst team, supported by a rigorous proprietary research process, as well as a strong integration of ESG analysis.

Our track record: how we have avoided defaults and fallen angels

Since 2008, there have been 61 fallen angels—issuers whose investment rating had been cut from investment-grade to non-investment-grade status by Moody's or Standard & Poor's—within the Asian (ex-Japan) credit space. Yet, we have avoided all of them in our investment-grade bond mandates. Furthermore, we have not registered a single default in our regional pan-Asian fixed-income portfolio holdings over the past 12 years.⁶

We believe this reflects not just the experience and expertise of our team, but also our commitment as active managers to safeguard investors from potential capital loss and credit write-offs, through a rigorous investment process, sound risk management, and a strong focus on corporate governance.

Number of fallen angels in Asia (ex-Japan) (2008—2020)



Source: Manulife Investment Management, Standard & Poor's, Moody's, J.P. Morgan Asia Credit Index (JACI), June 2020.

⁶ Past performance is not indicative of future returns. No investment strategy or risk management technique can guarantee returns or eliminate risk in any market environment.

Our proprietary credit assessment methodology: a unique blend of art and science

Our dedicated Asian fixed-income team has an extensive on-the-ground network: Comprising 79 investment professionals of 18 different nationalities across 11 markets in Asia, the team speaks 14 different languages.⁷

It's this unique combination of art (our diversity of analysts, language ability, and local on-the-ground familiarity) and science (our technical knowledge, deep expertise, and ESG framework) that drives our strong track record in credit selection.

1 Our people: robust, open communication is key

Supporting our fixed-income team is a tightly knit, 23-strong Asian credit research team that thrives in an open, collaborative environment. Robust and round-the-clock open communication within the team and with other local offices and desks—particularly the equity research desk—ensures timely exchange and analysis of topical news, as well as a rigorous assessment of company governance. We value this exchange of ideas and information with the equities desk because different asset class investors interpret information from different angles, providing for robust discussion and good cross-reference when evaluating a company's credit profile.

In addition, we have a dedicated ESG team to fully integrate ESG assessment into our credit research process and ensure the investment team is equipped with the necessary ESG tools and skill set (see more in "Our proprietary ESG framework and tools"). The ESG team works closely with the investment team by providing valuable insight on ESG risks in Asia credits, as well as analysis on green bond structures.

The dedicated ESG team regularly reviews external research providers and ESG data providers. It also organises training on specific issues that are recorded and added to a training video library. Key members of the Asian fixed-income investment team (portfolio managers and credit analysts) are notably enrolled in sustainable finance/ESG executive programmes with third-party providers such as Harvard Business School, NYU, and Cambridge University.

By sharing information and collaborating closely with our ESG analysts, the Asian credit research team is able to jointly review material ESG factors, which is critical in sifting out the good from the bad. A full picture is then pieced together before making a truly well-rounded investment decision.

More importantly, in 2018, the firm formed an ESG task force dedicated to our Asian fixed-income portfolios. The objective of the task force is to ensure we execute on and track our progress in ESG integration through a collaborative and transparent committee. The task force is chaired by Singapore-based Deputy Head of Asian Fixed Income Murray Collis and consists of members from various functions: global ESG integration team members, Asian fixed-income portfolio managers, client portfolio managers, and Asian credit research team members, including Fiona Cheung, ACIS, ACS, head of Asia credit.

2 Our process: a unique structure and methodology set us apart

Investment decisions are guided by our comprehensive in-house credit-rating resources, led by the **Manulife Asia Credit Committee (MACC)**, under the guidance of Fiona Cheung.

A dedicated committee comprising senior fixed-income professionals across Asia, the MACC ensures that each credit is rigorously analysed. During the credit analysis process, the MACC takes into consideration valuable local insight from the Asian credit research team. All credit issues are debated before being added to the investment team's eligible credit coverage universe.

The MACC holds weekly meetings to decide whether newly issued bonds will be placed on a master approved names list. Credit analysis would include investment rationale and the proposed internal risk rating in their credit thesis, which is then presented to the head of Asia credit. The decision is binary: Each bond is either approved or rejected for inclusion. If approved, each portfolio manager will then assess if the bond is appropriate for inclusion in their portfolios.

⁷ As of July 16, 2020.

Unlike most credit research reporting structures, our analysts report to the head of credit, rather than portfolio managers who may have considerable influence over names to include in a portfolio. With full independence in conducting their analysis, our analysts engage in robust discussion and flag any governance issues directly to the head of credit.

Perhaps most importantly, we use a differentiated, holistic research approach compared with traditional rating agencies. While a rating agency's methodology relies heavily on information and data presented by the management of the issuer to conduct credit assessment, we synthesise proprietary information from a range of sources: (1) independent research of credit names identified by our research team, and (2) robust external due diligence by our team on the ground through their contacts.

Therefore, our people and their expertise are critical in our success. Based on their experience, they design a set of bespoke analytical tools to each issue under consideration. We shall examine this leading edge in the next section.

3 Our proprietary ESG framework and tools

As part of our overall credit assessment framework, our analysts use an internal corporate ESG scorecard to assign a risk-intensity ranking for every corporate issuer based on each of the three factors. We're also guided by a proprietary ESG materiality map for each sector.

Our Asian credit ESG scorecard

This scorecard aims at increasing transparency on how our credit analysts capture ESG risks when assessing a company's credit worthiness. Although ESG factors are already embedded into our internal risk ratings (as mentioned in "Our process: a unique structure and methodology set us apart"), the framework aims to quantify how ESG factors affect our credit-rating decisions.

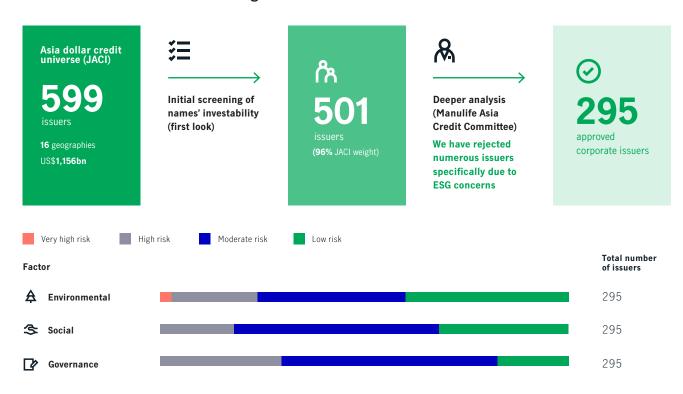
Each ranking corresponds to an estimated impact on the internal risk rating (in notches). Amongst the three factors, the greatest emphasis is placed on governance issues. An approve-and-reject system is in place to help us to steer clear of specific names, regardless of their price and yield. This systematic approach has helped us exclude numerous issuers, mostly due to governance concerns.

By using this scorecard, our credit analysts can categorise each ESG factor into intensity rankings based on various qualitative attributes. Credit analysts are empowered to determine if a different magnitude of notching is appropriate when considering potential mitigating factors such as government support, business diversification, and financial strength.

Our ESG materiality map by industry

Our dedicated ESG team developed a materiality map across different industries in order to facilitate the calibration of our internal risk intensity rankings, which provide two-fold benefits: to ensure credit analysts have considered all potential material ESG factors and to align our approach across the entire credit team.

How we screen Asian credits through our ESG framework



Source: Manulife Investment Management, J.P. Morgan Asia Credit Index (JACI), as of October 27, 2020. For illustrative purpose only. The figure 295 reflects the number of Asian corporate issuers approved by Manulife Asia Credit Committee.

Emphasis on the "G" in ESG is critical in Asia

Governance risks exist in every credit market, whether they're developed or emerging. However, the nature of governance risks and how they should be assessed differs significantly between these two types of markets.

In Asia, we believe that a more holistic credit assessment framework—integrating both quantitative and qualitative factors is integral to fully understanding the associated risks. Quite often, qualitative factors are overlooked; in our opinion, this is risky, as there should be no room for doubt when assessing credits.

Lack of formal governance structures

Many Asian businesses tend to be family owned and, as a result, the corporate governance structure and published financial statements may not tell the full story.

For example, corporate governance best practices typically state that a company must have independent directors on its board to serve as a check on management. In Asia, many publicly owned family businesses meet this best practice—at least on paper.

However, a closer examination of the relationship between the independent director(s) and the family owners, in certain cases, can reveal shared businesses or personal interests that might impair the directors' ability to objectively supervise the business.

As such relationships are often hidden from scrutiny, our local on-the-ground presence plays a key role in uncovering and understanding the dynamics of these companies.

Related entities and transactions

Another key issue in Asian credits is assessing related entities and transactions. While conglomerates exist in many markets, differing accounting and disclosure standards sometimes make it difficult to understand the real relationships between parent and subsidiary firms, including their financial dealings.

Credit risks in this area can manifest in numerous ways.

- 回 Loans made between the parent and subsidiary
- **(\$7**) Intra-group purchases of products and inventory
- 3 Share pledges by the parent company to secure funding
- m Key companies in the group are unlisted, with no public reporting requirements

Although each of these factors poses different challenges and implications to understand, collectively they can create an opaque picture of a company's and group's financial health, potentially exposing investors to unanticipated risks.

Qualitative assessment of governance factors

Cognisant of these governance issues, our investment approach in key Asian markets such as China, Indonesia and India involve deeper due diligence, local reach, and insight. This enables us to conduct more qualitative assessments.

When analysing governance, our focus is usually on the financial health of both the issuer and the sponsor. It's also important to examine related entities, as we have come across circumstances in which the controlling shareholder tries to extract liquidity from an issuer in order to meet the financial obligations of a sister company.

In other instances, credit lines may be shared between the issuing group and the family's other businesses. This means that any financial stress in one company could cascade onto the healthier one.

Our due diligence therefore focuses on aspects such as related-party transactions and banks' willingness to loan to an issuer. On-the-ground teams look at other factors, such as the reputation of the founding family, or whether there's a reputable minority shareholder.

The importance of understanding these factors in Asia will be presented in three case studies in which governance played a key role in preserving investors' capital.

Case studies: our track record underscores a robust ESG process

The three case studies below illustrate how governance factors have played a key role in our credit decisions that foresaw issues before they surfaced publicly.

Case study A8: one of the leading car rental companies in China

How its financial standing was affected by a subsidiary's woes

Company A is a leading car rental company in China. Despite its solid market position, we rejected the name for all our credit portfolios due to the G factor.

Our research uncovered an increasing number of relatedparty transactions between Company A and its parent company. They included vehicle purchases, disposals, and leases in which disclosures on the terms of transactions were limited. The parent company had also pledged its shares in Company A for bank loans, leaving it vulnerable to negative movements in Company A's share price.

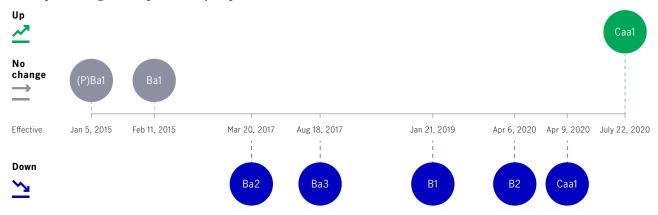
We noted that Company A's chairman and owner controls other business ventures, including a food and beverage (F&B) company whose reputation was closely linked to Company A. Several board members and senior management of the F&B company were also former employees of both Company A and the parent company.

Our governance analysis took all these factors, as well as the company's external links, into account.

A short-seller report on the F&B company soon brought up allegations of sales fabrication and related-party transactions, which were later confirmed. This caused Company A's share price to plummet, which in turn triggered margin calls for the share-pledged loan at the parent company level.

Company A subsequently announced a profit warning as it reported 1H2O results. The firm noted that it was expecting a material write-off on receivables from its parent company as well as other sister companies. The company is now seeking rescue from potential white knights.

Moody's rating history of Company A



For illustrative purpose only.

This information is intended only to illustrate some of the investment methodologies and philosophies of the investment team. The material does not constitute an offer or an invitation by or on behalf of Manulife Investment Management Limited to any person to buy or sell any security. This material should not be viewed as a current or past recommendation or solicitation of an offer to buy or sell any investment products or to adopt any investment strategy. The historical success, or the investment team's belief in future success, of any of the strategies is not indicative of, and has no bearing on, future results. Risk controls and other proprietary technology do not promise any level of performance or guarantee against loss of principal. Past performance is not indicative of future results. The security disclosed may or may not be a current investment in the portfolio. It should not be assumed that an investment in these securities or sectors was or will be profitable. The investment team may use some or all of the techniques described herein. No investment strategy or risk management technique can guarantee returns or eliminate risk in any market environment.

Case study B9: one of the leading materials companies in China

How high cash levels may not always be everything

A debut bond issuance of Company B in 2017 saw strong investor interest, as well as a Ba3 rating by Moody's. However, we rejected the name due to what we considered to be high governance risks.

There were red flags around the firm's corporate governance, including poor disclosures of its high level of related-party transactions and opaque customer and supplier relationships, as well as a high share pledge by its parent company.

Weak cash flow generation was recorded, despite its rapid growth in sales. The company also reported abnormally high margins without convincing evidence of having a clear edge in a highly competitive industry. Most importantly, its parent company, which was an unlisted entity, provided very limited disclosure of its financials.

The company' subsequent failure to repay a bond issue triggered a cross-default on other issued bonds. This was despite having a significant amount of cash on its balance sheet. The parent company's chairman was later arrested for alleged misappropriation of listed company funds.

This case highlighted the need for in-depth analysis to form a full picture of a company's overall financials. Prior to the default, Company B had a healthy cash position, but the money was channelled to the parent company to help with debt repayment.

This is a classic case of cash not always being king on company balance sheets.

Bond price movement of Company B



For illustrative purpose only.

⁹ This information is intended only to illustrate some of the investment methodologies and philosophies of the investment team. The material does not constitute an offer or an invitation by or on behalf of Manulife Investment Management Limited to any person to buy or sell any security. This material should not be viewed as a current or past recommendation or solicitation of an offer to buy or sell any investment products or to adopt any investment strategy. The historical success, or the investment team's belief in future success, of any of the strategies is not indicative of, and has no bearing on, future results. Risk controls and other proprietary technology do not promise any level of performance or guarantee against loss of principal. Past performance is not indicative of future results. The security disclosed may or may not be a current investment in the portfolio. It should not be assumed that an investment in these securities or sectors was or will be profitable. The investment team may use some or all of the techniques described herein. No investment strategy or risk management technique can guarantee returns or eliminate risk in any market environment.

Case study C¹⁰: a leading retail company in India

How our on-the-ground research unearthed local knowledge

A leading retailer and supermarket chain in India, Company C issued roughly a half billion worth of bonds in 2020. The bonds were rated BB– by Standard & Poor's and BB by Fitch. The new issue was well received, due to its strong market technicals and a general lack of nonrenewable supply of high-yield bonds. The market also liked the fact that a substantial portion of Company C was held by a well-known global company.

Notwithstanding its good market position, we assigned the issue with a single-B credit rating. This was because Company C had high leverage, high inventory days outstanding, numerous related-party transactions, and a tight liquidity position. Most importantly, corporate governance fundamentals were weak.

Our on-the-ground research also uncovered potential overleverage by the promoter group, which had an

unfavourable reputation for its top-down management style. Executions and payments were also slower than its industry peers.

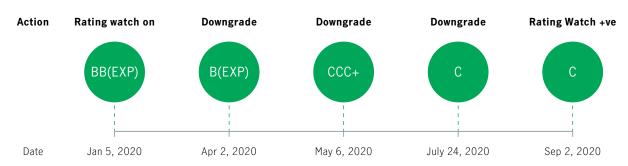
The relatively high inventory days outstanding suggested a likelihood of channel stuffing by its main supplier, which was a sister company. In return, Company C enjoyed longer account payable days. While related-party transactions are generally justifiable, there's a need for close monitoring, as they skew the financial disclosure of each entity.

In March 2020, the COVID-19 pandemic dented India's economic activities and stock market. On the back of concerns around the largest shareholder's financial health, the bond price plunged to 25 cents a dollar in April, before rebounding to around 60 cents in June on hopes of a white knight rescue.

More recently, Company C made an overdue coupon payment on outstanding USD bonds, while a white knight has since agreed to acquire part of the business.

Fitch rating history of Company C





For illustrative purpose only.

This information is intended only to illustrate some of the investment methodologies and philosophies of the investment team. The material does not constitute an offer or an invitation by or on behalf of Manulife Investment Management Limited to any person to buy or sell any security. This material should not be viewed as a current or past recommendation or solicitation of an offer to buy or sell any investment products or to adopt any investment strategy. The historical success, or the investment team's belief in future success, of any of the strategies is not indicative of, and has no bearing on, future results. Risk controls and other proprietary technology do not promise any level of performance or guarantee against loss of principal. Past performance is not indicative of future results. The security disclosed may or may not be a current investment in the portfolio. It should not be assumed that an investment in these securities or sectors was or will be profitable. The investment team may use some or all of the techniques described herein. No investment strategy or risk management technique can guarantee returns or eliminate risk in any market environment.

Conclusion

ESG factors are important drivers of credit quality

As the world adapts to the new normal in a pandemic environment, businesses are bracing themselves for greater operational and compliance risks. In view of this, more stringent regulations are expected over the next decade.

As Asian markets mature, investors will increasingly place the spotlight on ESG matters. In Asia, all eyes are on "G" as corporates navigate growing economic challenges. Pressure from investors to heighten governance standards and transparency will only increase.

Additionally, with geopolitics playing a more significant role in determining market movements, there will be increasing focus on the role of ESG, especially as the United States blacklists overseas companies that are deemed noncompliant. Businesses with weak ESG profiles could then be seen as vulnerable and open to political exploitation.

Without a doubt, ESG analysis will play a key role in driving credit quality going forward. At Manulife Investment Management, we are well placed to help investors navigate and add value in this new world.

Important information

© 2020 Manulife Investment Management. All rights reserved. Manulife Investment Management, the Stylized M Design, and Manulife Investment Management & Stylized M Design are trademarks of The Manufacturers Life Insurance Company and are used by it, and by its affiliates under license.

This confidential document is for the exclusive use of the intended institutional investor or their agents and may not be transmitted, reproduced or used in whole or in part for any other purpose, nor may it be disclosed or made available, directly or indirectly, in whole or in part, to any other person without our prior written consent

A widespread health crisis such as a global pandemic could cause substantial market volatility, exchange trading suspensions and closures, and affect portfolio performance. For example, the novel coronavirus disease (COVID-19) has resulted in significant disruptions to global business activity. The impact of a health crisis and other epidemics and pandemics that may arise in the future, could affect the global economy in ways that cannot necessarily be foreseen at the present time. A health crisis may exacerbate other pre-existing political, social and economic risks. Any such impact could adversely affect the portfolio's performance, resulting in losses to your investment."

About Manulife Investment Management

Manulife Investment Management is the global wealth and asset management segment of Manulife Financial Corporation. We draw on more than a century of financial stewardship to partner with clients across our institutional, retail, and retirement businesses globally. Our specialist approach to money management includes the highly differentiated strategies of our fixed-income, specialized equity, multi-asset solutions, and private markets teams—along with access to specialized, unaffiliated asset managers from around the world through our multimanager model.

These materials have not been reviewed by, are not registered with any securities or other regulatory authority, and may, where appropriate, be distributed by the following Manulife entities in their respective jurisdictions. Additional information about Manulife Investment Management may be found at www.manulifeim.com/institutional

Australia: Hancock Natural Resource Group Australasia Pty Limited., Manulife Investment Management (Hong Kong) Limited. Brazil: Hancock Asset Management Brasil Ltda. Canada: Manulife Investment Management Limited, Manulife Investment Management Distributors Inc., Manulife Investment Management (North America) Limited, Manulife Investment Management Private Markets (Canada) Corp. China: Manulife Overseas Investment Fund Management (Shanghai) Limited Company. European Economic Area and United Kingdom: Manulife Investment Management (Europe) Ltd. which is authorised and regulated by the Financial Conduct Authority, Manulife Investment Management (Ireland) Ltd. which is authorised and regulated by the Central Bank of Ireland Hong Kong: Manulife Investment Management (Hong Kong) Limited. Indonesia: PT Manulife Asset Manajemen Indonesia. Japan: Manulife Investment Management (Japan) Limited. Malaysia: Manulife Investment Management (M) Berhad (formerly known as Manulife Asset Management Services Berhad) 200801033087 (834424-U) Philippines: Manulife Investment Management and Trust Corporation. Singapore: Manulife Investment Management (Singapore) Pte. Ltd. (Company Registration No. 200709952G) South Korea: Manulife Investment Management (Hong Kong) Limited. Switzerland: Manulife Investment Management (US) LLC. Taiwan: Manulife Investment Management (Taiwan) Co. Ltd. United States: John Hancock Investment Management LLC, Manulife Investment Fund Management (Vietnam) Company Limited.

No Manulife entity makes any representation that the contents of this presentation are appropriate for use in all locations, or that the transactions, securities, products, instruments or services discussed in this presentation are available or appropriate for sale or use in all jurisdictions or countries, or by all investors or counterparties. All recipients of this presentation are responsible for compliance with applicable laws and regulations.

Any general discussions or opinions contained within this document regarding securities or market conditions represent the view of either the source cited or Manulife Investment Management as of the day of writing and are subject to change. There can be no assurance that actual outcomes will match the assumptions or that actual returns will match any expected returns. The information and/or analysis contained in this material have been compiled or arrived at from sources believed to be reliable, but Manulife Investment Management does not make any representation as to their accuracy, correctness, usefulness or completeness and does not accept liability for any loss arising from the use hereof or the information and/or analysis contained herein. Information about the portfolio's holdings, asset allocation, or country diversification is historical and will be subject to future change. Neither Manulife Investment Management or its affiliates, nor any of their directors, officers or employees shall assume any liability or responsibility for any direct or indirect loss or damage or any other consequence of any person acting or not acting in reliance on the information contained herein.

The information in this material may contain projections or other forward-looking statements regarding future events, targets, management discipline or other expectations, and is only as current as of the date indicated. The information in this material including statements concerning financial market trends, are based on current market conditions, which will fluctuate and may be superseded by subsequent market events or for other reasons. This material was prepared solely for informational purposes and does not constitute, and is not intended to constitute, a recommendation, professional advice, an offer, solicitation or an invitation by or on behalf of Manulife Investment Management or its affiliates to any person to buy or sell any security or to adopt any investment strategy, and shall not form the basis of, nor may it accompany nor form part of, any right or contract to buy or sell any security or to adopt any investment strategy. Nothing in this material constitutes investment, legal, accounting, tax or other advice, or a representation that any investment or strategy is suitable or appropriate to your individual circumstances, or otherwise constitutes a personal recommendation to you. Manulife Investment Management or its affiliates does not provide legal or tax advice, and you are encouraged to consult your own lawyer, accountant, or other advisor before making any financial decision. Prospective investors should take appropriate professional advice before making any investment decision. In all cases where historical performance is presented, note that past performance is not indicative of future results and you should not rely upon it as the basis for making an investment decision.

The distribution of the information contained in this presentation may be restricted by law and persons who access it are required to comply with any such restrictions. The contents of this presentation are not intended for distribution to, or use by, any person or entity in any jurisdiction or country where such distribution or use would be contrary to any applicable laws or regulations. By accepting this material you confirm that you are aware of the laws in your own jurisdiction relating to the provision and sale of the funds, portfolios or other investments discussed in this presentation and you warrant and represent that you will not pass on or utilize the information contained in the presentation in a manner that could constitute a breach of such laws by any Manulife entity or any other person.

Australia: Manulife Investment Management (Hong Kong) Limited ("Manulife IM (HK)") is exempt from the requirement to hold an Australian financial services license under the Corporations Act in respect of the financial services being offered in this material. Manulife IM (HK) is regulated by the Securities and Futures Commission of Hong Kong ("SFC") under Hong Kong laws, which differ from Australian laws. This presentation is directed at wholesale investors only.

China: No invitation to offer, or offer for, or sale of any security will be made to the public in China (which, for the purposes of this paragraph, does not include the Hong Kong or Macau Special Administrative Regions or Taiwan) or by any means that would be deemed public under the laws of China. The offering document of the subject fund(s) has not been submitted to or approved by the China Securities Regulatory Commission or other relevant governmental authorities in China. Securities may only be offered or sold to Chinese investors that are authorized to buy and sell securities denominated in foreign exchange. Prospective investors resident in China are responsible for obtaining all relevant approvals from the Chinese government authorities, including but not limited to the State Administration of Foreign Exchange, before investing.

Hong Kong: This material is provided to Professional Investors, as defined in the Hong Kong Securities and Futures Ordinance and the Securities and Futures (Professional Investor) Rules, in Hong Kong only. It is not intended for and should not be distributed to, or relied upon, by members of the public or retail investors.

Malaysia: This material was prepared solely for information purposes and is not an offer or solicitation by anyone in any jurisdictions or to any person to whom it is unlawful to make such an offer or solicitation.

Singapore: This material is intended for Accredited Investors and Institutional Investors as defined in the Securities and Futures Act.

South Korea: This material is intended for Qualified Professional Investors under the Financial Investment Services and Capital Market Act ("FSCMA"). Manulife Investment Management does not make any representation with respect to the eligibility of any recipient of these materials to acquire any interest in any security under the laws of Korea, including, without limitation, the Foreign Exchange Transaction Act and Regulations thereunder. An interest may not be offered, sold or delivered directly or indirectly, or offered, sold or delivered to any person for re-offering or resale, directly or indirectly, in Korea or to any resident of Korea, except in compliance with the FSCMA and any other applicable laws and regulations. The term "resident of Korea" means any natural person having his place of domicile or residence in Korea, or any corporation or other entity organized under the laws of Korea or having its main office in Korea.

Switzerland: This material is intended for Professional Clients, including Institutional Clients, as defined in the Federal Financial Services Act ("FinSA") and its implementing ordinance, at the exclusion of Professional Clients with an opting-out pursuant to Art. 5 (1) FinSA ("Opting-Out Clients"), and/or Qualified Investors pursuant to the Federal Collective Investment Schemes Act ("CISA") and its implementing ordinances, at the exclusion of Opting-Out Clients and Managed/Advisory Retail Clients pursuant to Art. 10 (3ter) CISA where relevant. The information provided in this material is for information purpose only and does not constitute an offer, a solicitation or a recommendation to contract a financial instrument or a financial service as defined under FinSA. This material does not constitute an implicit or explicit investment advice. The information provided herein is general in nature and does not constitute an advertisement of financial products in Switzerland pursuant to FinSA and its implementing ordinance.

European Economic Area and United Kingdom: The data and information presented is directed solely at persons who are Professional Investors in accordance with the Markets in Financial Instruments Directive (2004/39/EC) as transposed into the relevant jurisdiction. Further, the information and data presented does not constitute, and is not intended to constitute, "marketing" as defined in the Alternative Investment Fund Managers Directive.

United States: Manulife Investment Management (US) LLC ("Manulife IM US") and Manulife Investment Management (North America) Limited ("Manulife IM NA") are indirect wholly owned subsidiaries of Manulife. Manulife IM (US) and certain of our affiliates provide investment management and advisory services in the United States under the brand name "John Hancock Investment Management". This material is not intended to be, nor shall it be interpreted or construed as, a recommendation or providing advice, impartial or otherwise.

525426

Manulife Investment Management