HONG KONG MONETARY AUTHORITY

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USD LIABILITIES OF NON-FINANCIAL FIRMS IN MAINLAND CHINA: HOW LARGE IS THE DEFAULT RISK?

Key points:

- *Using financial data of more than 2,300 Mainland listed non-financial firms at end-2014, this note finds that on average the exposure of Mainland enterprises to RMB depreciation is not high given limited USD borrowing among Mainland firms.*

- *However, some tradable sectors are found to be more vulnerable than others due to their higher net USD leverage, higher liquidity risk, and weaker repayment abilities. Loan repayment abilities could be a concern especially for firms that were making losses but with relatively higher net USD leverage.*

- *Assuming a hypothetical 10% depreciation of the RMB against the USD, the results of our sensitivity test suggest that only 3% of the firms are found to be unable to cover their foreign exchange losses by EBIT. However, loan repayment abilities could be a concern for firms that already made losses while suffering also RMB depreciation. USD loans borrowed by these loss-making firms accounted for 5% of total USD loans of all listed non-financial companies, concentrating in sectors such as consumer goods & services and materials.*

- *Although this implies that the credit risk to USD loans of Mainland banks cannot be dismissed, Mainland bank exposure to these loans is relatively small as foreign currency (including USD) loans account only for around 5 –6% of total bank loans in recent years.*

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I. INTRODUCTION

The ongoing interest rate normalisation in the US and increased RMB depreciation expectations against the USD have raised concerns over the vulnerability of the fast expansion in Mainland external debt over the past few years, especially the part taken on by the corporate sector. During the current economic slowdown, the worsening financial conditions of Mainland manufacturers have made loan repayment abilities of these corporate borrowers a concern of both policy makers and market analysts.

Against this background, using financial data including USD loans and deposits of more than 2,300 Mainland listed non-financial firms at end-2014 when foreign currency borrowing reached its peak[1], this note attempts to answer the following questions: 1) how leveraged are Mainland firms in USD credit and what is the USD borrowing pattern among these firms, 2) where do the vulnerabilities lie, and 3) how large is the risk associated with further depreciation of RMB against the USD.

II. USD BORROWING PATTERN AMONG MAINLAND FIRMS

Listed company data suggest that only a limited proportion of Mainland enterprises had net USD liabilities and on average the size was not large. Due to data limitation, only data on foreign currency loans rather than other debt instruments such as bonds are available for Mainland listed firms. By net USD liabilities we therefore refer to the difference between USD loans and deposits.[2] By end-2014, only less than a quarter of listed Mainland non-financial firms reported to have borrowed USD loans, among which around 78%, or equivalent to 19% of all listed non-financial firms were net USD corporate borrowers with their USD loans larger than USD deposits (Chart 1). Net USD borrowers are of particular interest as they are exposed to the risk of RMB depreciation. In our sample, 90% of these net USD borrowers had net USD liabilities to total liabilities ratios below 15%, suggesting that for most of these

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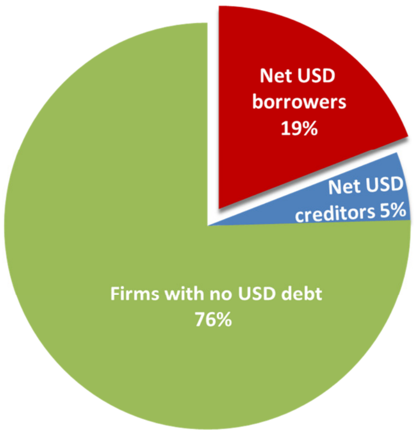
1 This analysis studies the USD borrowing pattern using 2014 data as the 2015 financial data for listed firms are currently not available. This should however not be an issue as foreign currency borrowing reached its peak in 2014 in Mainland China right before the increased pace of repayment of their foreign currency loans by Mainland firms following the depreciation of RMB and thus may still provide meaningful policy implications.

2 In this analysis, USD borrowing of Mainland listed non-financial firms also included HKD loans, as the HKD exchange rate is linked to the USD and thus the HKD borrowing of Mainland enterprises also exposes to the potential depreciation of RMB against the USD.

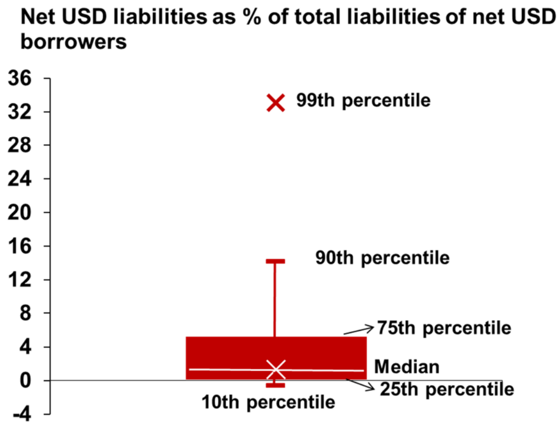
net USD borrowers the exposure to RMB depreciation was limited (Chart 2). Nonetheless, the other 10% had relatively higher net USD liabilities to total liabilities ratios. For instance, the most leveraged firms (at the 99th percentile) in terms of net USD borrowing reported to have a net USD liabilities to total liabilities ratio of around 33%.

Chart 1: Exposure of Mainland non-financial listed firms to USD borrowing



Sources: WIND and staff estimates.

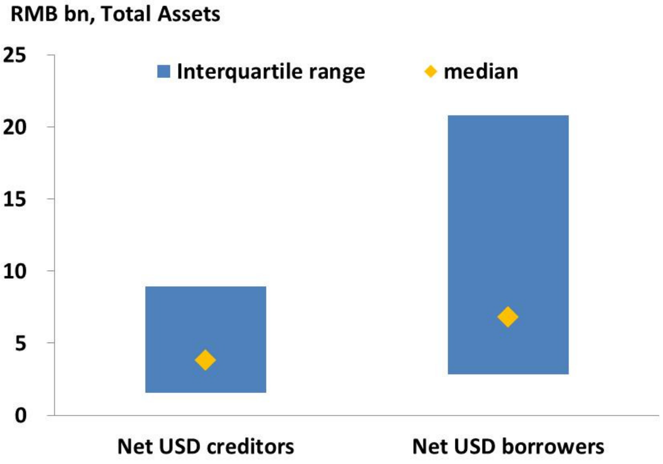
Chart 2: Net USD liabilities to total liabilities ratio of net USD borrowers



Sources: WIND and staff estimates.

Net USD corporate borrowers in Mainland China tended to be larger in size, and meanwhile most of them had overseas business income. In our sample of listed non-financial Mainland firms, net USD borrowers on average had larger total assets compared with net USD creditors (Chart 3). The positive correlation between firms' sizes and their exposure in USD borrowing in one way may reflect the fact that larger firms in Mainland China had better access to credit markets, even for foreign currency borrowing.

Chart 3: Total assets: net USD creditors vs net USD borrowers

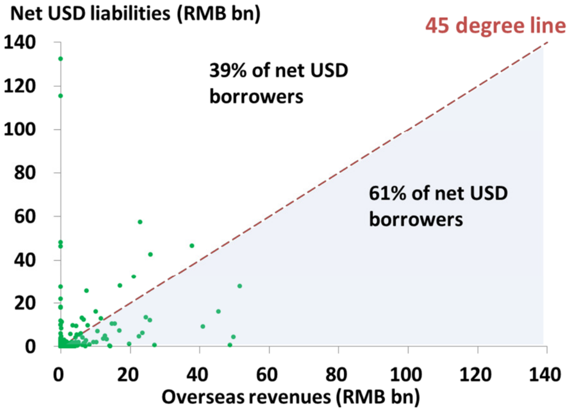


Sources: WIND and staff estimates.

III. WHERE DO THE VULNERABILITIES LIE?

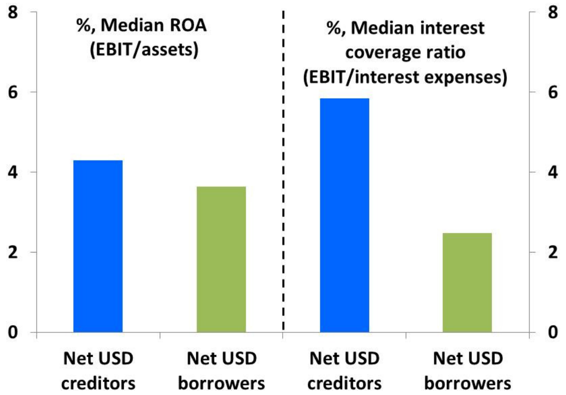
The exposure of Mainland firms to currency mismatch appeared to be small. Among the net USD borrowers, 75% of these net USD borrowers had overseas revenues, and 61% enjoyed "natural hedge", with their net USD liabilities being able to be covered by 1-year overseas revenues (Chart 4). **However, net USD borrowers in general tended to have weaker financial positions and thus lower loan repayment abilities compared with net USD creditors.** As discussed in the previous section, around 25% of net USD borrowers didn't report to have overseas revenues, and therefore are exposed to potential currency mismatch risks. In terms of financial soundness, while the profitability of net USD borrowers was comparable to that of net USD creditors, net USD borrowers had a lower median interest coverage ratio of 2.5 compared with 5.8 of net USD creditors, implying that the borrowers may face more pressure in generating enough revenue to cover their interest expenses (Chart 5). This also reflects the generally higher leverage of net USD borrowers compared with net USD creditors. For instance, the average liabilities-to-assets ratio of net USD borrowers in 2014 was 0.54, higher than that of net USD creditors which was 0.43.

Chart 4: Net USD liabilities vs 1-year overseas revenues of net USD borrowers



Sources: WIND and staff estimates.

Chart 5: Profitability and interest coverage ratio: net USD creditors vs net USD borrowers



Sources: WIND and staff estimates.

Further analyses suggest that while different sectors faced different risks, net USD borrowers in many tradable sectors were more vulnerable. For instance, the risk of currency mismatch of some tradable goods and service sectors, including materials, consumer goods & services, industrial, and IT, is not high as many of them had overseas business income and thus enjoyed "natural hedge" (Table 1). Compared with other sectors, these sectors however had higher net USD leverage and also faced higher liquidity risk given their much greater reliance on short-term funding. Moreover, loan repayment abilities of these sectors, especially overcapacity sectors such as materials, were particularly weak, reflected by their extremely low interest coverage ratios, low return on assets (ROA) and high loss-making ratios. In comparison, non-tradable sectors such as real estate and utilities had lower leverage but were exposed to greater currency risks as they do not usually have overseas business income. Loan repayment abilities of these two sectors were in general better than the tradable sectors, though weaker for real estate developers. Loan repayment abilities could be a concern for firms that were making losses but with relatively higher net USD leverage. For instance, the percentage of loss-making firms in heavily leveraged sectors such as consumer goods & services, IT, and materials are found to be particularly large.

Table 1: Risks and repayment abilities of Mainland net USD loan borrowers by sector

	Materials	IT/Telecom.	Consumer Gds/Serv.	Industrials	Energy	Real Estate	Utilities
Leverage							
Average net USD liability ratio of highly leveraged borrowers (75-99 percentile)	21	19	18	18	14	8	8
Currency mismatch							
% of firms with natural hedge	65	74	68	55	35	33	13
Liquidity risk							
Short-term USD loans as % of total USD loans	73	65	77	28	61	39	11
Repayment ability							
Interest coverage (median)	1.7	3.4	2.7	2.5	3.6	2.9	3.3
ROA (median)	3.4	3.3	3.3	3.8	3.7	3.8	6.5
% of loss-making firms	12	10	15	8	18	0	0

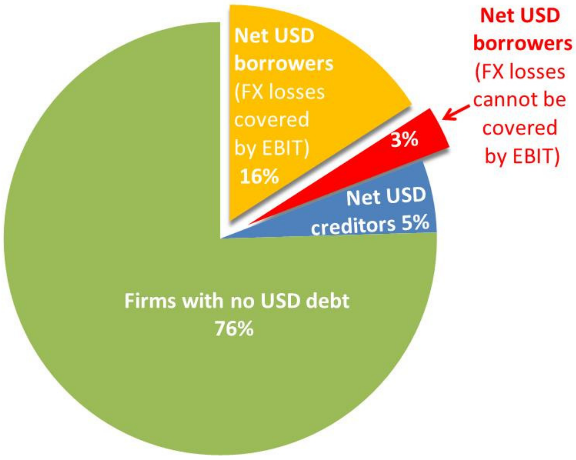
Note: Green, yellow and red shadings indicate that the financial indicators point to low, medium and high risks.
Sources: WIND and staff estimates.

IV. HOW LARGE IS THE RISK? A SENSITIVITY TEST

Given the vulnerabilities identified in the previous section, a natural question is how large the risk would be if RMB continued to depreciate against the USD given uncertainties in economic outlook and the ongoing normalisation of interest rates in the US. To shed some light on this question, we consider a hypothetical 10% depreciation of RMB against the USD and then estimate the foreign exchange loss based on firms' reported net USD liabilities in 2014, which in turn is compared with their earnings before interest and tax (EBIT).

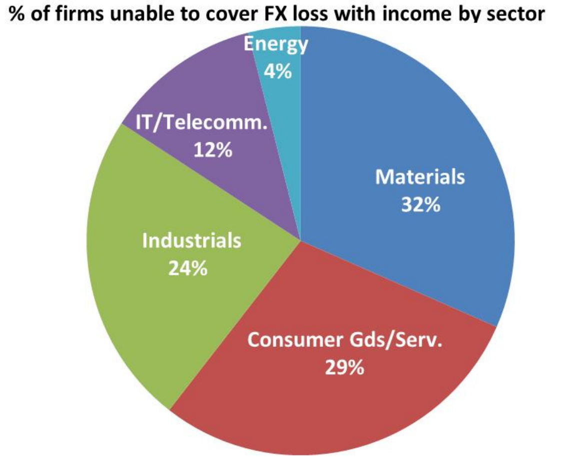
We found that **a hypothetical 10% depreciation of RMB against the USD would cause net USD borrowers to suffer foreign exchange losses but 83% of them** (or 16% of all listed non-financial firms) **could cover their losses by one-year EBIT** (Chart 6). 17% (or 3% of all listed non-financial firms) would be unable to cover foreign exchange losses by EBIT, but a majority of them (62%) were SOEs, and therefore may receive government support. Firms unable to cover foreign exchange loss by income were mainly concentrated in the most vulnerable sectors as pointed out in the previous section, such as materials, consumer goods & services, and industrials (Chart 7). Again, our analyses highlight in particular the risks facing overcapacity sectors. For instance, 32% of net USD borrowers unable to cover their foreign exchange losses with EBIT in our sensitivity test are from the materials sector.

Chart 6: Number of net USD borrower affected in the sensitivity test



Sources: WIND and staff estimates.

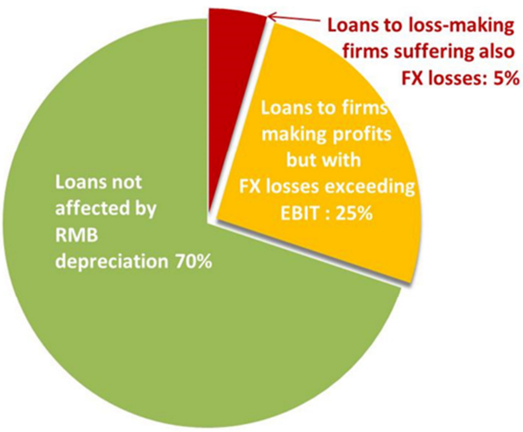
Chart 7: Firms unable to cover foreign exchange loss with income by sector



Sources: WIND and staff estimates.

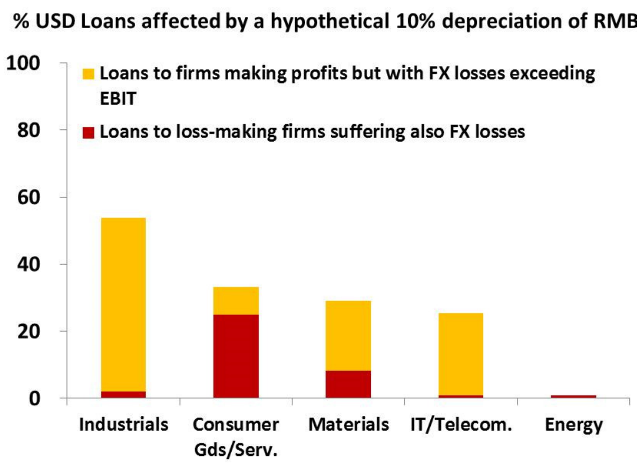
However, as USD borrowing was concentrated in highly leveraged borrowers, **the impact of a hypothetical 10% RMB depreciation would be bigger in terms of loan size**. While only 3% of all listed non-financial firms would not unable to cover their foreign exchange losses by one-year EBIT, their borrowing accounted for as much as 30% of total USD loans of all listed non-financial firms (Chart 8). Loan repayment abilities could be a concern for firms that already made losses while suffering also RMB depreciation. USD loans borrowed by these firms accounted for 5% of total USD loans of all listed non-financial companies, concentrating in sectors such as consumer goods & services and materials. For instance, loss-making firms in consumer goods & services sector had borrowed 25% of the USD loans extended to the sector (Chart 9).

Chart 8: Loans affected by RMB depreciation in the sensitivity test



Sources: WIND and staff estimates.

Chart 9: Loans affected RMB depreciation in the sensitivity test by sector



Sources: WIND and staff estimates.

Although this implies that the credit risk to USD loans of Mainland banks cannot be dismissed, Mainland bank exposure to these loans is relatively small as foreign currency (including USD) loans account only for around 5－6% of total bank loans in recent years.

V. CONCLUSION

Overall, our findings suggest that on average, the exposure of Mainland enterprises to RMB depreciation is not high given limited USD borrowing among Mainland firms. However, some tradable goods and service sectors, especially materials, consumer goods & services, industrial, and IT, are found to be more vulnerable than others due to their higher net USD leverage, higher liquidity risk, and weaker repayment abilities. A hypothetical 10% depreciation of the RMB against the USD would lead net USD borrowers to suffer foreign exchange losses but only 3% of the firms are found to be unable to cover their foreign exchange losses by EBIT. As USD borrowing was concentrated in highly leveraged borrowers, the credit risk to USD loans of Mainland banks cannot be totally dismissed, especially USD loans borrowed by firms that already made losses. That said, Mainland bank exposure to these loans is relatively small.

It should be noted that our analysis is subject to caveats. First, this analysis focuses only on USD loans borrowed by listed firms rather than other debt instruments such as bonds due to data limitation. Second, only listed non-financial firms are studied, and therefore the risk profile of non-listed smaller USD loan borrowers is not covered.