

US High Grade Strategy Focus

Taiwan's foreign bond hot-pot

- We dip a spoon into the bubbling broth of Taiwan's life insurers' foreign bond portfolios, extrapolating from public filings to sketch out exposures by country, sector and risk profile.
- High equity volatility has yet to dislodge IG credit spreads, and our fair value model helps explain why credit may be less sensitive to gyrations in equity vol for as long as global risk-free yields remain low. We remain comfortable with overall credit spreads at these levels. We believe investors should position for curve steepening.

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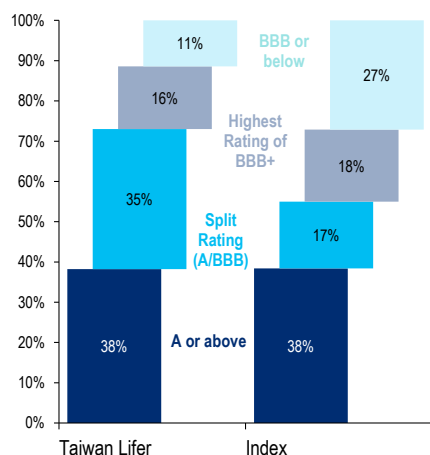
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Figure 1. Estimated rating breakdown of Taiwan lifer DM corporate holdings



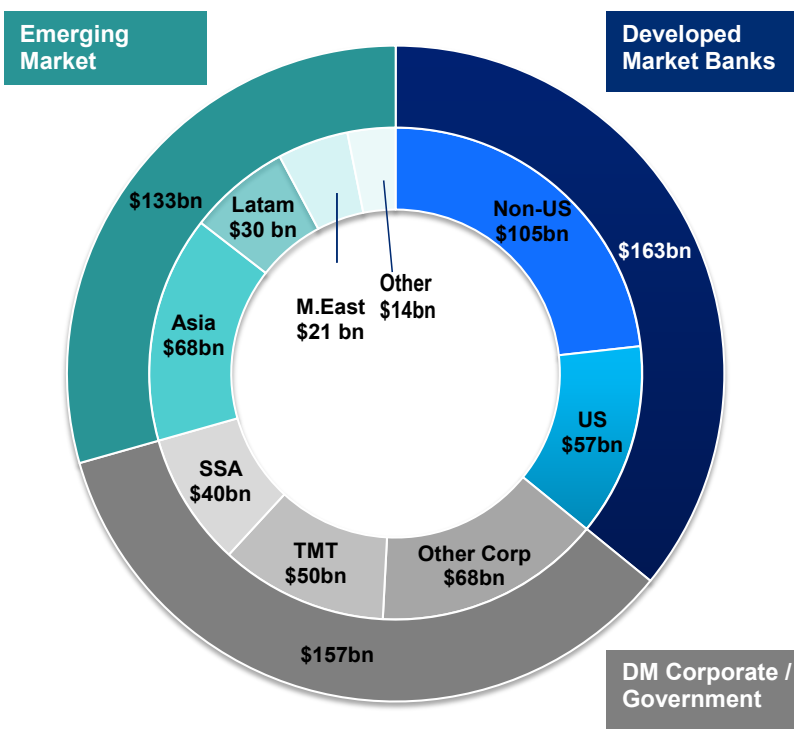
Source: Citi Research

For as long as flows, not fundamentals, remain the arbiter of credit spreads, the most pointed questions about fair value in the US IG corporate market will revolve around the wants and preferences (and hedge costs) of the investors who have been most aggressive in accumulating paper: the Japanese banks and lifers (and their domestic asset manager partners), the U.S. corporate repatriators, and, of course, the Taiwanese life insurance community.

Life insurance companies in Taiwan have expanded their foreign investment portfolios by roughly \$300 billion over the past five years, to \$480 bn. These foreign holdings, almost entirely in fixed income, now exceed central bank reserves of \$451 bn and account for upwards of 65% of total lifer assets. The force of Taiwanese back-end demand makes mincemeat of 10s30s spread curves, while the insurers' overnight flows set the tone for US credit markets and leave the US IG market with a never-ending case of jetlag. This much, by now, is well understood.

Yet relatively little is known with certainty about what's in the hot pot¹ of Taiwan lifer portfolios, as life insurance companies are not required to disclose their portfolios in detail. However, Taiwanese regulations do require the holding companies of several insurers, representing around half of insurers' assets, to disclose their counterparty exposures. We utilize this dataset of exposures to nearly 300 distinct counterparties from Morocco to Malaysia to create a map, albeit an imperfect one, of the foreign investments of the lifers as of Dec 2017. Global investors may find value in this map as a guide to market segments with persistent demand, or alternatively, as a guide to vulnerabilities should investor preferences change.

Figure 2. Estimated foreign exposures of Taiwan life insurance companies, extrapolated from regulatory filings of four financial holding companies



Source: Citi Research; Excludes estimated \$32 bn of asset manager and other foreign exposures.

¹ A bubbling broth of meat, seafood, tofu, and other goodies share communally across a table, and very popular across Taiwan and the broader region.

We summarize a few important takeaways from our analysis.

Overweight Yankee banks, TMT

We estimate that exposures of the lifers span three segments in roughly equal proportion – emerging market debt, developed market banks, and non-financial DM exposures. The lifers hold nearly twice the exposure to non-US banks relative to U.S. banks, with exposures to banks in Australia, Canada, France, Germany, Great Britain, Italy, Japan, Netherlands, Spain and Switzerland. Outside of banks, the lifers hold a disproportionate share of paper in TMT, with significant exposures to large issuers in the energy, food, health care and pharmaceuticals space. Exposure to two large US telecom issuers, for example, reached \$11 bn in our sample, suggesting a total exposure across lifers of roughly \$24 bn, assuming our sample is proportionate to total investments. If these holdings are all in long-maturity paper, Taiwan lifers could represent close to 30% of the back-end holdings of these issuers.

Within EM, a significant focus on commodities

Within our sample, issuers held roughly \$63 bn of exposures to foreign counterparties from emerging markets, of which about \$24 bn, or 38%, is exposure to commodity-focused firms or economies with significant reliance on energy or metals. (The EM corporate index as a whole has roughly 25% exposure to commodities, while EM quasi/sov indexes have about half of their exposure to commodity-focused regions.) Exposures to Middle East economies and companies represent about 16% of overall EM risk. If our sample is representative, this would reflect total Taiwan lifer exposure of about \$51 bn to commodity-focused EM counterparties. The commodity exposure rises to \$65 bn if DM energy/metals counterparties are added.

Favor split-rated A/BBB at the expense of BBB-flat

Taiwan lifer regulations governing investments in non-bank bonds strongly incentivize holdings of issuers with at least one BBB+ rating. We find that lifers hold 35% of their non-bank DM portfolio in split-rated A/BBB bonds, roughly twice the share of the market at large. Bonds rates BBB-flat or below represent just 11% of the portfolio, versus 27% for the market at large.

Combination of 'Formosa' and global exposure

Local regulations permit lifers to hold only 45% of assets in foreign bonds, but treat locally listed foreign bonds as domestic. So-called Formosa bonds account for about 22% of lifers' foreign exposures, and about 45% of their developed market bank exposures, 33% of TMT exposure, and only about 12 percent of other corporate exposures. EM exposure is almost entirely via international, not Formosa, bonds. Formosa bonds are generally structured as long-dated bonds with short calls, and investors should be aware of the upcoming call decisions on \$21 billion of Formosa bonds in 2018, and another \$18 billion in 2019. Of the \$40 bn of bonds approaching calls in 2018 and 2019, \$15 bn are Yankee bank bonds, \$12 bn are TMT bonds, and \$9 bn are US bank bonds. Regulations have shifted to require longer non-callable periods, and if such terms are unacceptable to issuers, bonds that are called could be refinanced into the global, not Formosa, market. In addition, because Formosa bonds lack a liquid secondary market, insurers may find it necessary to reduce exposure to a particular name entirely in the global market.

We expect to present additional findings in future publications. Nevertheless, our view remains that the best days of Taiwan inflows are behind us, and are vulnerable to shifts in macroeconomic conditions, issuer downgrade, regulatory shifts, or new developments in exchange rate policy. Even if no unwind emerges, Taiwan lifers

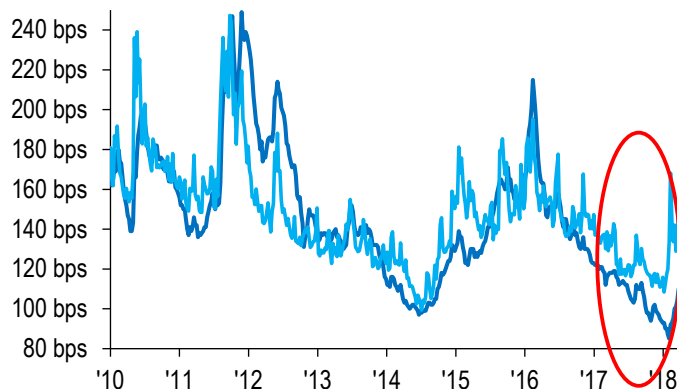
are approaching reasonable maximums in allocations to foreign credit, suggesting that further accumulation of USD portfolios' investments may need to shift to other firms. If other Taiwanese counterparties are more aggressive buyers, then net demand in the back end could be weaker. Once US pension flows slow into the back half of the year, we expect to grow more defensive and expect to increasingly favor the belly over the back end of the spread curve.

There are multiple potential sources of estimation error in our analysis, although we have taken steps to minimize these errors. First, exposures are reported at the holding company level, not at the insurer level, and thus could be attributable to other units within these holding companies, such as banks. We then multiply these exposures to match the total holdings of foreign bonds reported by the overall lifer community. However, we found that publicly reported aggregate levels of life insurance units' foreign exposures tracked well to the aggregated foreign exposures reported at the holding company level. Second, exposures are to counterparties as a whole, and are not necessarily indicative of bond holdings. However, lifers' public filings do indicate that their foreign exposures of lifers are almost entirely in fixed income, not equities. Third, we use an average 5-year FX exchange rate to translate currencies into USD, on the assumption that portfolios are valued at book exchange rates, and have accumulated over several years. We find roughly \$74 bn of exposures to US firms, implying an aggregate US bond exposure of \$156 bn, while US Treasury data show a total of about \$100 bn. We think it is possible that US TIC data understates the true exposure of Taiwan lifers to US firms, and in any case those figures do not capture holdings of Yankee issuers, which we show are substantial.

Fair value model update

Geopolitical developments have lifted equity volatility but we remain in a world of relatively low FX and energy vol, and one in which non-US paper offers relatively paltry yields compared to US credit.

Figure 3. Spread forecast model using equity, fx, and oil vol only



Source: Citi Research

Figure 4. Spread forecast model by adding Japan-US rates differential



Source: Citi Research

In an earlier [publication](#), we introduced two models for IG credit spreads – one that regresses spreads to implied vols in equities, FX and oil, and the other that adds a fourth variable to proxy reach-for-yield behavior by overseas investors into US IG, the world's primary destination for long-duration spread product. One feature of the "enhanced" model is that the sensitivity of spreads to equity vol is substantially lower than the version that lacks a reach for yield variable. As a result, the

enhanced model has performed especially well as VIX spiked and remained elevated. The enhanced model points to spreads reflecting fair value, while the standard vol-only model suggests spreads are 30 bps rich. Once again, these two models indicate the importance of the continued rate environment globally for fair valuation in credit, with the global reach for yield now keeping spreads an estimated 30 bps below levels where they otherwise would be.

Appendix A-1

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