

FEDERAL RESERVE BANK *of* NEW YORK

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MEMORANDUM		RESTRICTED FR
DATE	2/11/2010	
TO	Bill Dudley	
FROM	Adam Copeland, Antoine Martin, Michael Walker	
SUBJECT	Repo haircuts ¹	

This memo summarizes information concerning the differences in repo haircuts from two sources of data to which the FRB NY has access. The data shows that haircuts in tri-party did not increase much during the crisis, in contrast to haircuts reported in the dealer survey.

The FRB NY collects haircut information on repos from different sources. This memo focuses on two sources of data: The Markets Group collects data from dealers for the dealers' survey data and Bank Supervision collects tri-party repo data from the two clearing banks (BNYM and JPMC). The haircut information contained in the dealer survey represents haircuts that dealers take from clients, including hedge funds, REITS, banks and municipalities, some of which are prime-brokerage clients. Some dealers report haircuts on actual transactions while others report indicative levels. The haircut information contained in the tri-party data covers all major participants in the tri-party repo market and gives us information on the actual haircuts dealers give to tri-party repo investors.

These two sources of data show very different patterns in haircuts.² While haircuts reported in the dealer survey increased considerably during the second half of 2008, haircuts in tri-party stayed remarkably stable. In the tri-party data, for example:

- For Fed eligible collateral, Agency REMIC median haircuts went from 2.5% to 3.5%. For Money Market, the median haircut jumped from 3% to 5% in September, but was back below 3.5% in December.

¹ We thank Tobias Adrian, Michael Holscher, Frank Keane, Jamie McAndrews, and Fabiola Ravazzolo for their input

² The FRBNY also collects haircut data from hedge funds through the buy-side survey. This data is broadly consistent with the dealer survey.

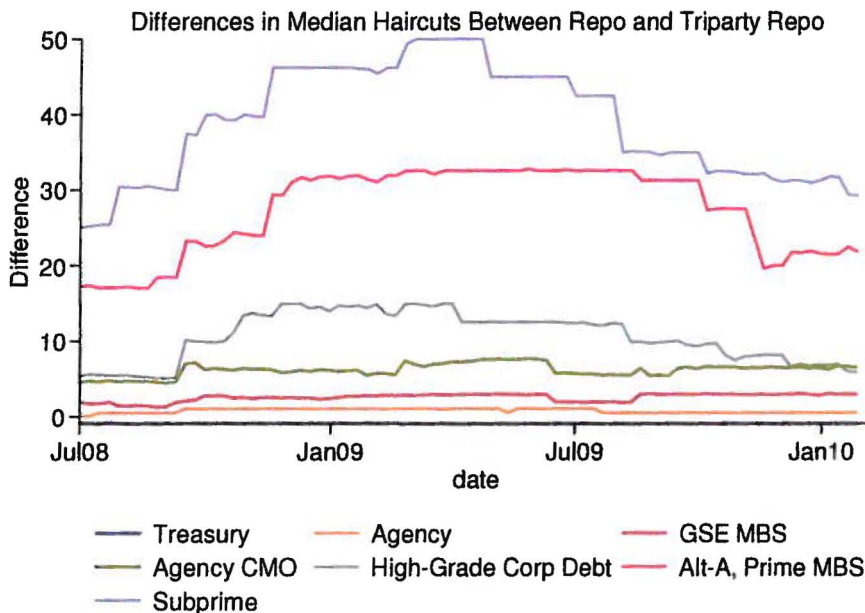
- For DTC eligible collateral, the largest increases were observed for Corporate bonds (5% to 8.5%) and ABS (5.5% to 9%).

It is worth noting that some assets disappeared from the tri-party repo market altogether. This could be interpreted as an increase to 100% haircuts for such assets.

Table 1

Dealer survey (repo)	Tri-party
Treasury	US Treasuries and Strips
Agency	Agency Debenture
GSE MBS	Agency MBS
Agency CMO	Agency Remic
High-Grade Corp Debt	Corporate Bonds
Alt-A, Prime MBS	Private Label CMO
Subprime	Asset Backed Securities

Chart 1



Difference calculated as repo median minus triparty median for each asset class.

The collateral included in the asset categories listed in the dealer survey and the tri-party repo data are not perfectly comparable. Nevertheless, Table 1 tries to match some asset

categories that appear to be similar in both datasets.

Chart 1 shows the difference in the median haircuts for the different asset classes from Table 1. It appears that the haircuts for the most liquid collateral classes (Treasuries, Agency Debt) are quite similar in the two datasets. Indeed, haircuts for Treasuries appear to be slightly lower in the dealer survey data than in the tri-party repo data. Greater differences in haircuts appear for less liquid collateral classes.

One possible reason for the difference in haircut behavior could be the balance sheet constraints experienced by the dealers in the fall of 2008. Dealers might have increased haircuts relative to the tri-party haircuts they faced to reduce balance sheet usage by customers. This is consistent with the pattern that dealers were charging higher haircuts for less liquid collateral. The very liquid collateral can be rehypothecated at low cost, for example in the tri-party repo market. In contrast, it may be more difficult for dealers to rehypothecate less liquid collateral, so the dealers would ask for a higher haircut from its brokerage clients.

It is likely that broker-dealers have a more responsive risk management policy compared to tri-party cash investors because they are more willing to face less creditworthy counterparties and potentially take possession of collateral. This could be due to several reasons, notably broker-dealers could be providing profitable ancillary services to the same counterparties, have formal capital and liquidity buffers, and, in contrast to money funds in tri-party, not be bound by 2a-7 investment guidelines, which give them more flexibility to hold and liquidate collateral over time. Indeed, in the context of the tri-party repo taskforce, cash investors have made it clear that they look at the counterparty, and not the collateral, when making their lending decision.

It is also possible that tri-party cash investors have less ability to adjust haircut levels due to competitive dynamics that are different from the broker dealer industry. In the tri-party repo taskforce, we have heard anecdotally that some cash investors felt that competitive pressure did not allow them to get the margins they preferred.

The appendix provides more graphs of the data, including min and max haircuts. We are concerned that min and max haircuts can vary due to idiosyncratic factors. It would be more desirable to be able to report the 10%-90% or 25%-75% haircuts. While the data allows us to do this with the tri-party repo data, dealers do not report similar numbers in the dealer survey.

Minimum regulatory haircuts

The stark differences between the behavior of haircuts in tri-party repo and those reported in the dealer survey have consequences for the desirability of minimum regulatory haircuts.

Haircuts in the tri-party repo market did not change very much over the crisis, so procyclicality of investor margins does not appear to be a major issue in this market.³ A concern may be that the margins were too low and that minimum regulatory haircuts would force haircuts in tri-party to be set at more appropriate level. Assessing whether haircuts were too low could be done using a VAR methodology. Preliminary work suggests that the haircut levels may not have been excessively low, given observed volatility of asset classes during the second half of 2008. Two caveats are important, however: First, the analysis was conducted using indices as proxies for broad asset classes. This could misrepresent or understate the volatility of the assets actually used as collateral in tri-party. Second, policy intervention probably dampened asset volatility, so that observed volatility may understate "fundamental" volatility.

As noted above, some assets disappeared from the tri-party repo market. It may be desirable that such assets remain out of the tri-party repo market in the future and it is not clear that minimum regulatory haircuts would be particularly useful for these assets. Alternatively, the appropriate minimum haircut for these assets may be 100%.

It should be noted that minimum regulatory haircuts were never mentioned in the context of the tri-party taskforce. For this reason, a discussion of the merits of these haircuts by you would be a surprise to markets.

More important, perhaps, judging from the data, is to stabilize the observed haircut spiral in prime brokerage. Here the concern might not arise from excessively low haircuts in normal times (although the range of acceptable collateral may well have expanded beyond a safe level) but the rise in haircuts during the crisis might have been excessive. This in turn would point toward the Fed's willingness to lend in these markets to prevent sharp increases in haircuts as an equally important policy to consider as minimum haircut levels.

³ One clearing bank did significantly increase the margins it required from its dealers for the provision of intraday credit after the unwind of the tri-party repo trades. This is a separate concern that dealers have expressed in the tri-party repo taskforce.

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Considering dealer haircuts reported in the dealer survey, it is clear that they increased significantly during the crisis, especially for less liquid asset classes. Again, this suggests that the problem in prime brokerage seems to be mainly of pro-cyclicality more than minimum levels in normal times, although the level of haircuts could have been too low. Minimum regulatory requirement can help dampen cyclical fluctuations in haircuts mainly by maintaining haircuts at a high level during good time, so that the increase during bad times is smaller than it would otherwise be. Of course, this suggests that haircuts may be set inefficiently high in good times, which is costly.

Appendix

Chart 2

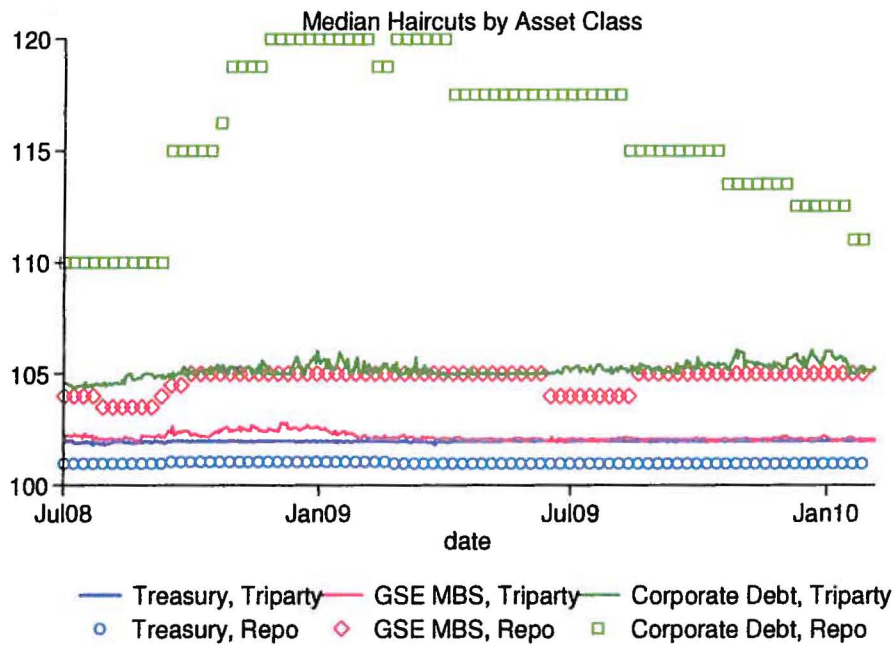


Chart 2 reports the median in three asset classes we believe are closely comparable between the two surveys. The pattern is consistent with what was shown in Chart 1.

Time Series Charts

Charts 3 to 9 provide a comparison of min, median, and max haircuts for pairs of asset classes given in table 1.

Chart 3

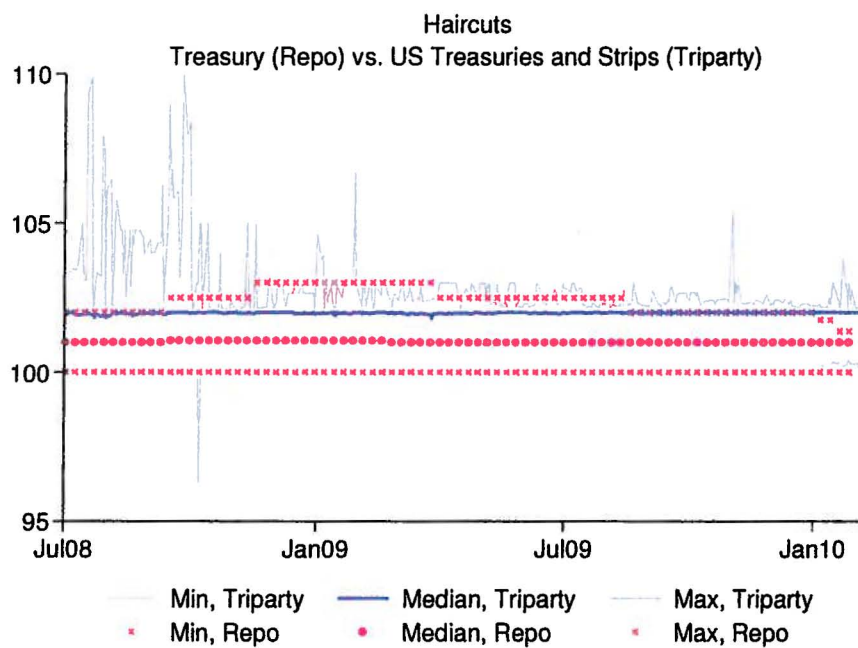


Chart 4

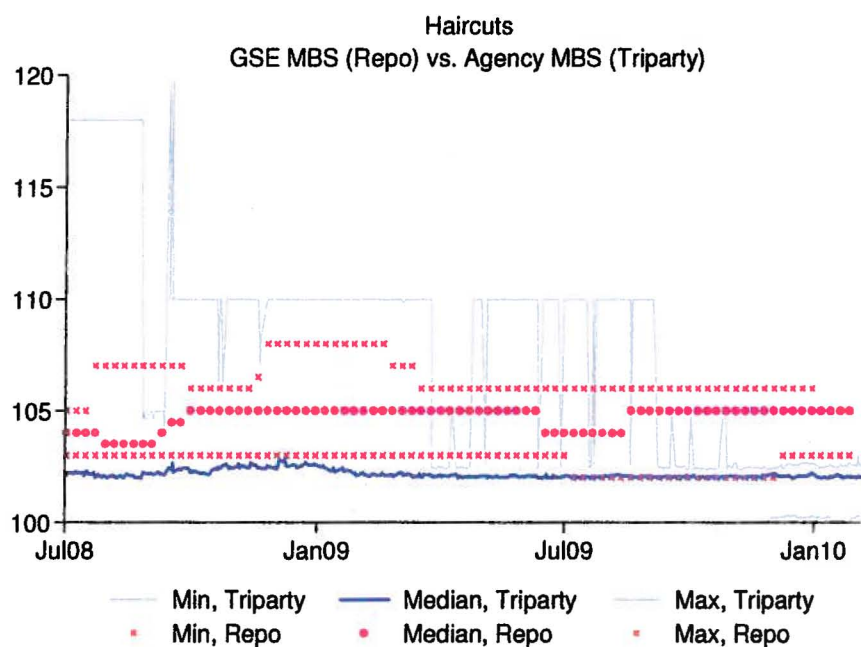


Chart 5

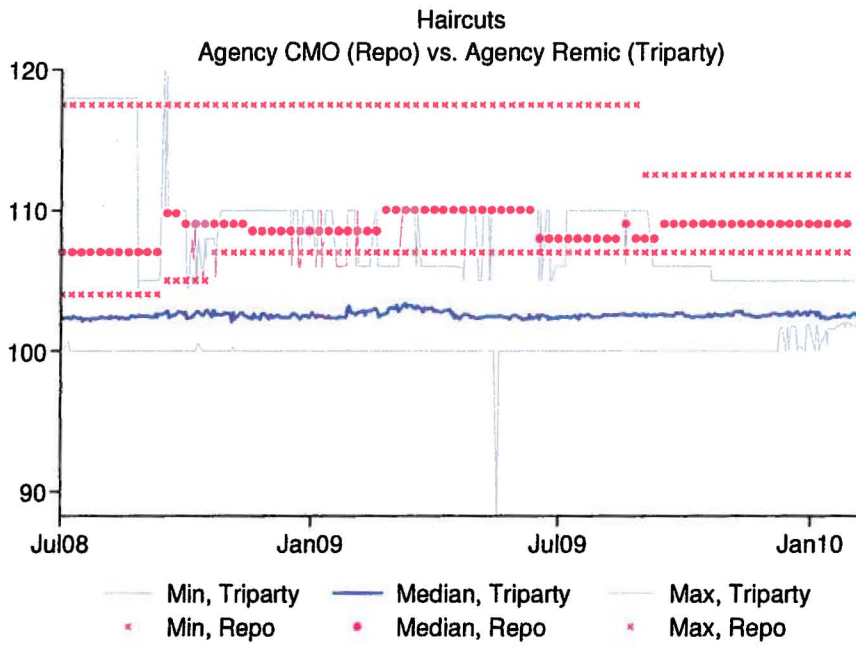


Chart 6

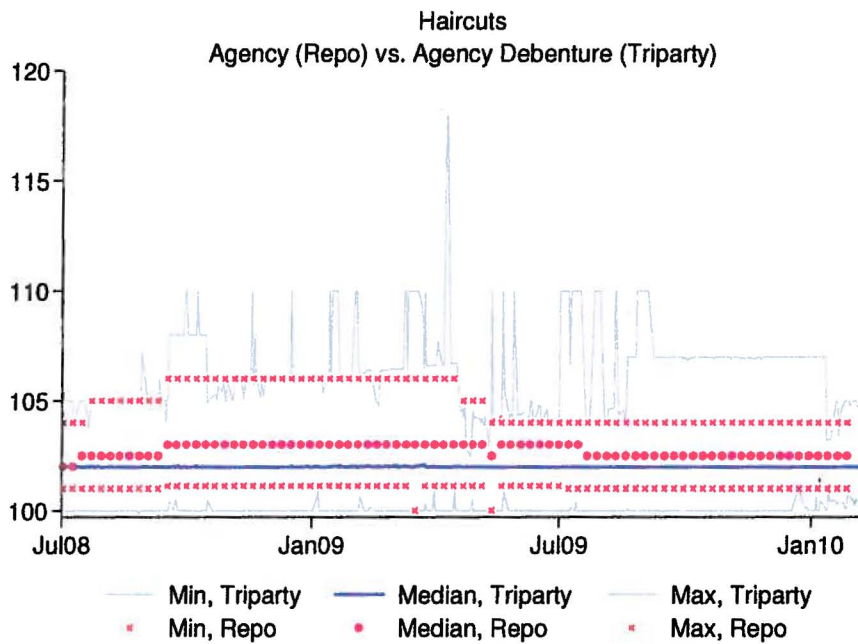


Chart 7

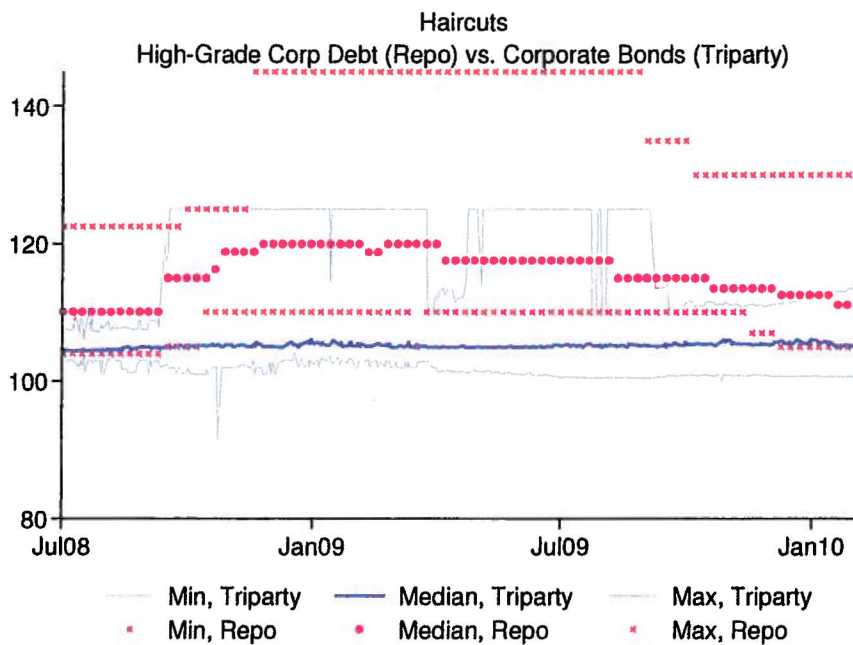


Chart 8

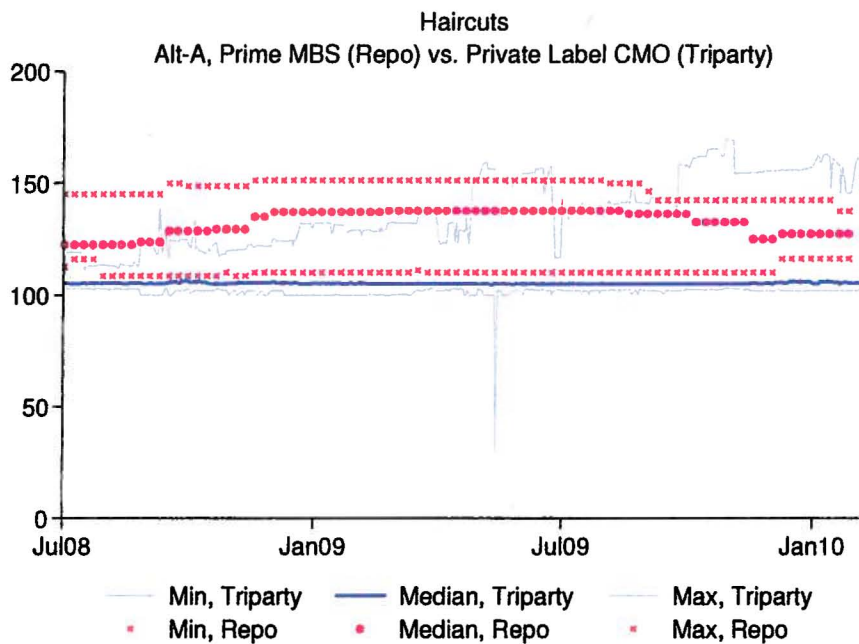
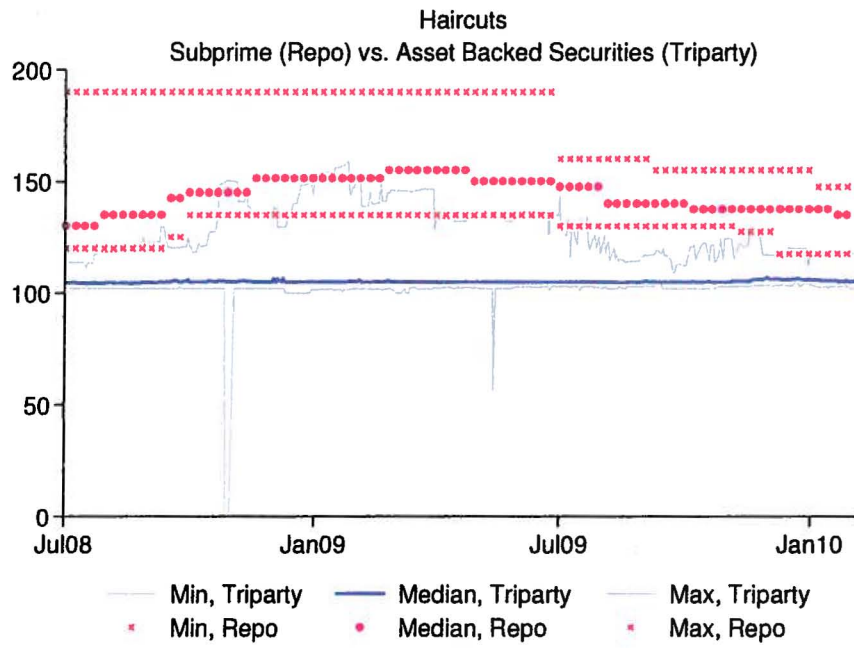


Chart 9



Scatter Plots

Charts 10 to 16 compare median haircuts with haircuts from the dealer survey on the y axis and haircuts from tri-party on the x axis. The red line represents the 45 degree line. Dots grouped below the 45 degree line indicate that haircuts reported in the dealer survey are smaller than haircuts in tri-party.

Treasury (Repo) vs. US Treasuries and Strips (Triparty)

Repo Haircuts

Triparty Haircuts

Line represents 45 degree line

Haircuts
GSE MBS (Repo) vs. Agency MBS (Triparty)

Repo Haircuts

Triparty Haircuts

Line represents 45 degree line

Chart 12

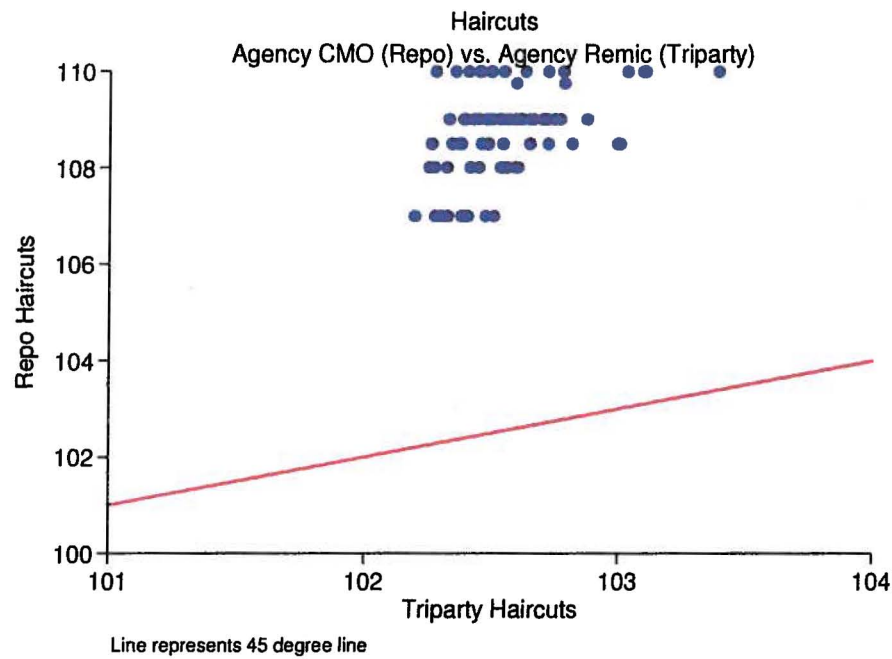


Chart 13

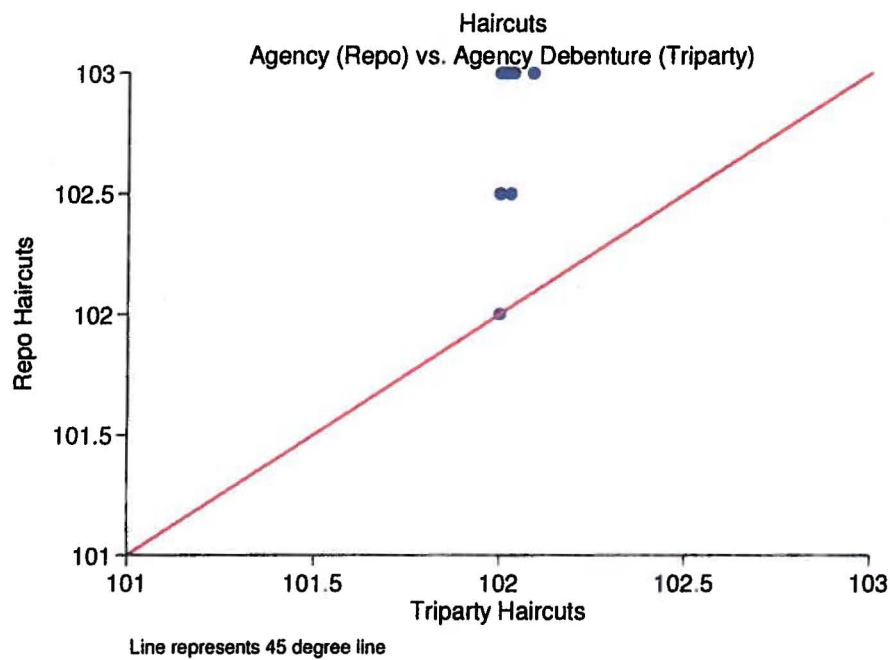


Chart 14

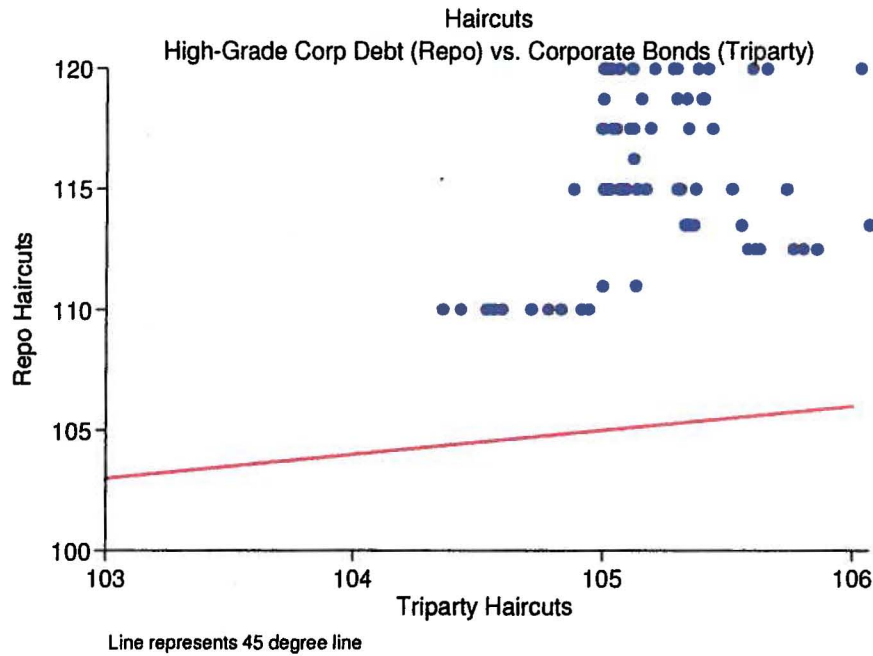


Chart 15

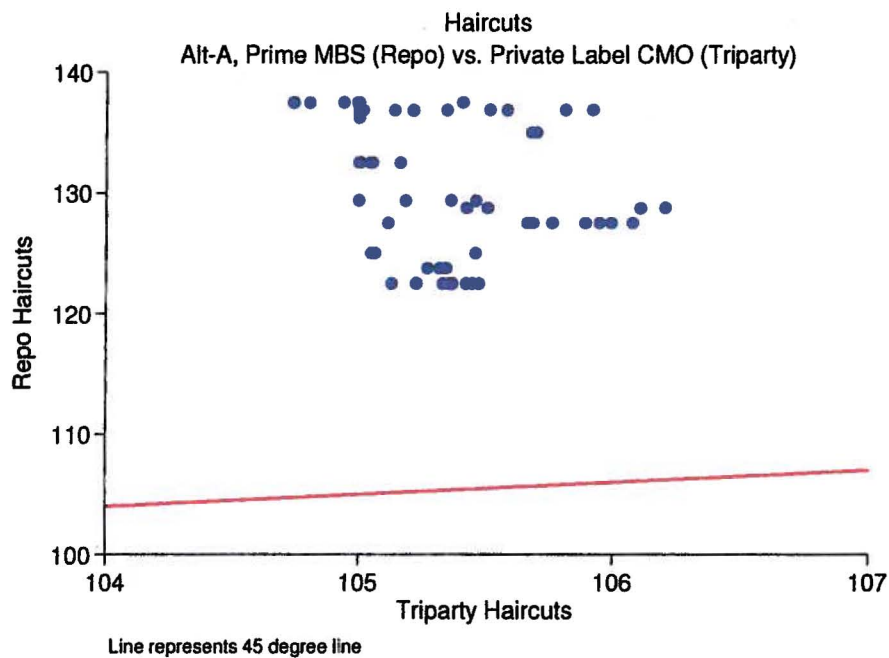
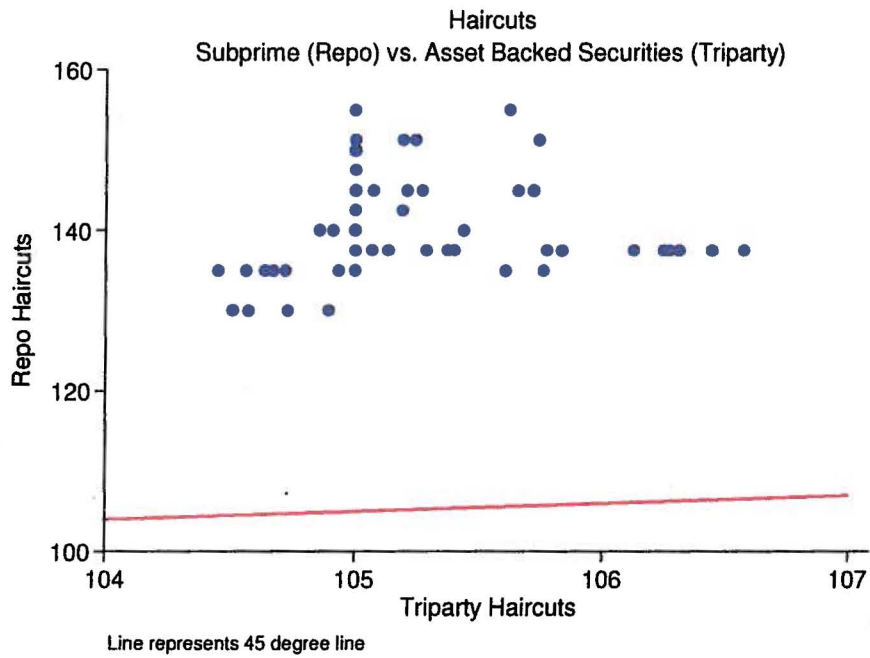


Chart 16



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