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COLLATERAL POLICY AND ADVERSE SELECTION

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Financial market's liquidity effects directly on stable and effective functioning of all spheres of the economy. The problem of the liquidity regulation is actual for many countries. Any economy has a certain demand for central bank liabilities – cash or reserves balances. Where there is a structural shortage of liquidity in the economy, the central bank will lend reserves balances to banks (and in some cases to securities firms) on a regular basis in order to fund the market's holdings of central bank liabilities. Some of this lending is purely liquidity management; but, importantly, some is used to implement monetary policy.

As a rule (to which there are very few exceptions), central banks take collateral when extending liquidity. In considering the range of issues related to collateral, and making decisions about where to make trade–offs, central banks should keep in mind the purpose for which they are lending. The goal is to provide the right amount of liquidity, at the appropriate price, to the institutions the central bank wishes to transact with. Collateral policy should support the high–level goal.

Central bank takes some form of security against risk. Liquidity can be provided by the outright purchase of assets – a central bank could buy securities or foreign exchange for instance. The U.S. Fed and the Bank of Japan both have large, long–term outright holdings of securities broadly to match cash in circulation [1]. Some central banks do purchase a lot of foreign exchange outright, but this is predominantly for exchange rate management purposes, not for liquidity provision. But those central banks which operate with a structural shortage of liquidity provide liquidity predominantly in the form of short–term or

reverse transactions, as a collateralized loan, repo, or foreign exchange swap rather than through outright purchase, as this gives them better control of the maturity of such credit extension, and reduces the impact on other markets. This is true whether they lend regularly or occasionally; and whether the liquidity is extended intraday, overnight, or for a longer period.

Central banks do not necessarily take collateral owing to concerns of a substantial risk of default: they are, after all, lending to a restricted group of authorized and supervised institutions, which are likely in good standing with the central bank. Rather, central banks take collateral because the consequences of loss—in the rare case of default—are particularly serious; and because an appropriate collateral policy can influence the behavior of potential counterparties, and discourage adverse selection.

The demand for best rated and most liquid collateral (e.g., government securities) may increase substantially more than in the case of a reserve money shock because of the cheaper funding opportunities it provides, while low–liquidity least rated eligible products (e.g., top layer of the triangle) are pledged to the central bank. This may lead to a greater change in the collateral mix provided to the central bank. The arrows show the ongoing change in the contingent asset mix underlying the provision of

When considering central bank financing, commercial bankers compare the cost of central bank liquidity to alternative sources of funding using the same form of collateral. The availability of market funding, as well as the types of assets held and the liquidity position of commercial banks, are key factors in the determination of their bidding behavior. As a rule, treasurers strive to place with the central bank collateral having the lowest opportunity cost, although other factors may occasionally take precedence. Namely, all securities having a greater value on the repo market will be refinanced via market repos; otherwise the commercial bank incurs an opportunity cost equal to the spread between the central bank rate and the (lower) repo rate observed in the interbank market. Collateral selection is also made opportunistically when assets can be used in central bank refinancing operations at a rate lower than would be observed for comparable assets in the market. In both cases, funding–cost arbitrage tends to lower the average quality of the central bank collateral received when using pooling arrangements, in particular for central banks with the most accommodative collateral standards. It's «*Gresham's law of collateral*».

The incremental risk stemming from this tendency to provide central banks with the most suitable assets from a relative funding–cost perspective (i.e., the least creditworthy or leas liquid), can be offset to some extent, for instance by greater haircuts.

Central banks typically deduct initial margins («haircuts») in order to protect against credit, interest rate, foreign exchange, and liquidity risk. The margin generally is contingent on such factors as price volatility of the relevant asset class, the prospective time to liquidate the asset, the maturity of the asset, and the creditworthiness of the borrower. It is meant to take into account potential movement in asset prices over the time horizon of the loan. A more volatile (whether because of longer duration or other factors), less liquid asset carries a higher haircut.

In additional, there are also margin call practices: to limit market risk, central banks also value the haircut–adjusted collateral with a pre–determined trigger level. If the collateral value falls below a certain level, a margin call is implemented, meaning that the counterparty is required to provide additional assets or cash payments to make up the difference. This may also operate in reverse: if the collateral value increases, part of the collateral may be returned to the borrower.

Risk management techniques like Value–At–Risk can be used to assess some of the idiosyncratic risk components of least rated securities, so as to adjust the overall risk of the portfolio accordingly; though they may not be strong at picking up tail–event risks («jump to default») [2].

An alternative approach to this problem is «tranching». The pricing of different tranches at rates in line with coincident market rates prevailing on the underlying collateral provides a «no–arbitrage» environment that limits adverse selection. This is only possible if the collateral accepted is traded in liquid markets, so that a reliable price signal is observed. Limited scope for price differentiation exists in operational frameworks designed to accept regularly only a small set of collateral.

Conversely, monetary policy operating frameworks featuring liquidity–providing auctions organized with a broad pool of eligible collateral but no price distinction («pooling» rather than «tranching»), or without preset constraints to the eligible assets to be mobilized, are more exposed to «Gresham's law» of collateral.

The last market turmoil had brought to the fore a range of collateral issues, as the flexibility to provide liquidity in times of stress hinges crucially on the collateral framework developed by central banks. Collateral policy divergences have resulted in differences in the way the crisis was handled in different countries. The broader Eurosystem policy toward well–rated RMBS and covered bonds averted some of the

funding stress undergone by banks heavily involved in securitization of real estate loans, while the Fed and the BoE had to change their respective OMO collateral policy for such securities to be acceptable.

Granting eligibility to assets with little or no market liquidity (including certain securitization products) can influence commercial banks' asset–liability management decisions. Commercial banks may be tempted to reduce their holdings of highly liquid assets in favor of higher–yielding, less liquid assets if these assets are deemed eligible by the central bank. The «eligibility option» could thus represent an incentive for a greater level of liquidity leverage, i.e., a propensity to increase the share of low–liquidity and higher–yielding assets relative to the share of assets easy to liquidate in the market. In principle this «liquidity premium» given to lower–liquidity and creditworthy assets could have an impact on the relative prices of assets, as noted by rating agencies and other observers. One illustration of the likely market impact in times of stress is the central bank's willingness to accept less liquid collateral. Such access to central bank liquidity may help to prevent fire sales of illiquid assets, suggesting that the eligibility premia may stem excessive price declines in the market.

Although this impact seems empirically difficult to document and is limited in normal times, it represents a challenge to central banks, and an invitation to rethink the interaction between central bank monetary operations framework, and its potential impact on the credit cycle. In theory, we would expect a collateral framework with broad eligibility rules and no price discrimination to push credit spreads downwards overall; while frameworks with a narrow collateral base and/or price discrimination against less creditworthy or less liquid collateral should have less of an impact on relative asset prices (the relative pricing within each narrow tranche of eligible collateral is instead affected). The magnitude of this distortion should in principle be different depending on the breadth of eligibility. The introduction of a universal eligibility regime might in principle have an impact on credit spreads overall; relative spreads could change if the liquidity premium was very different for otherwise similar securities. Conversely, a framework restricted to a certain credit rating level could impact pricing vis–à–vis differently rated securities. The magnitude of the pricing impact should also reflect the intensity of the collateral use, namely the share of the usable collateral actually mobilized. In the case of the Fed, the ratio of eligible to actually used marketable collateral for short–term OMO operations is (in normal times) several hundred to one. This ratio stands at 20:1 overall for the Eurosystem. In part, this reflects the substantially higher proportion of the Eurosystem's assets made up by short–term OMO (around 10 times higher in absolute terms). The Eurosystem shows very different outturns when calculated for each subcomponent of the collateral pool. If for instance the collateral intensity of government securities is small (because the proportion of government securities actually used for Eurosystem operations is smaller than their weight in the collateral pool), the same calculation for ABS or bank bonds suggest a greater collateral intensity, and potentially a larger price impact. The heterogeneity of collateral intensity within the Eurosystem collateral pool highlights that collateral use depends on market incentives and tends to go toward a greater use of some specific sub–segments.

So, some of the differences in approach to collateral policy appear to reflect different goals regarding targeted counterparties and the way in which liquidity is expected to be channeled in the markets.

The majority of central banks, for a variety of reasons, extend the list of eligible collateral beyond domestic–currency denominated government (or central bank) securities and face trade–offs between minimizing additional risk (credit, liquidity, exchange rate, operational) and providing access to a sufficiently wide group of counterparties to allow the effective implementation of monetary policy and liquidity management. And more work needs to be done to develop central bank pricing incentives to counterparties to hold good quality, liquid assets in normal times.

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