Market Liquidity: A Central Bank View

Jan Lamers
De Nederlandsche Bank

It is a great pleasure for me to address this conference as a member of this panel. I would like to thank the LBMA for giving me the opportunity to share with you some experiences and thoughts of the Nederlandsche Bank about the gold *lease* market in this beautiful city of the Golden Gate Bridge.

I visited this city for the first time 26 years ago as a student, travelling with a Greyhound bus pass, and carrying the Student Guide 'Where to Stay' in my backpack. I recently found the diary from my 1976 USA trip. During the five days I stayed in this city I spent in total around $90. A cablecar ride was just a quarter in those days and the hotel cost me $10.60 per night. How different a visit to this city is when you return many years later as a central banker involved in the bullion business.

When I was asked by Stewart at the end of December last year to address this conference, there still was a decent gold lease market. The three-month rate was hovering around 55 basis points and the 12-month around 120 points and this was already quite low compared with the rates 10 months earlier. So what a change with today. During the period that I prepared my remarks the change in the market has become more and more visible.

Ladies and gentlemen, about ten days ago we had a seminar in our Bank entitled: "Financial markets – evaluating the past and discounting the future". In the next 15 minutes I will mostly limit myself to evaluating the past of the gold lease market. I will shed some light on our involvement in the gold lending market during the past 21 years and how we, based on this experience, assess the liquidity and the transparency in this market.

De Nederlandsche Bank has managed a portion of its gold reserves since 1981. We started with a maximum of 10 tons and raised the lending limit over the years to around 140 tons at the moment. The increase of the limit was a reaction to the growing demand for gold liquidity and occurred in a period when central banks were becoming more and more pro-active in managing reserves. In the beginning we limited ourselves to time deposits with a maximum tenor of three months. This maximum was consistent with our policy in the currency portfolios. After we got more comfortable with the market and credit risk, the maximum maturity was extended to 12 months.

By using only time deposits the maximum possible duration of our invested gold portfolio amounted roughly to 0.35 year. Given the shape of the yield curve, and the low return at the short end of the curve, we decided last year to increase the maximum duration to 1 year. We realised this extension by introducing lease rate swaps (LRS) with a maximum tenor of 5 years. We do not consider LRS as totally credit risk free. Outstanding swaps are marked to market weekly, and a positive market value of the swap is considered as credit risk and is charged to the credit line. After the implementation of LRS we gradually extended the duration of the portfolio to around 0.95 year in April 2002.

Now I would like to share some thoughts with you on the topic of this session: market liquidity. I have deliberately chosen not to elaborate about the volume of gold available for lending, because at the moment there is plenty of gold around and in the past three years many before me have touched upon this topic.

However, I want to make one remark. Given the decline in demand for gold liquidity and consequently the low rates, we have recently started withdrawing gold from the market. I am sure that we are not the only central bank doing so. This all means that if the demand for gold liquidity began to rise and rates tended to move up, there would be a relatively large stock available for immediate lending, because the lending limits stay in place. This may keep a cap on lease rates for some time.

I will now concentrate on trading liquidity in the gold lease market. Because the concept of liquidity has many faces, it is difficult to define it precisely. Furthermore it is also hard to apply the different liquidity concepts to a market in which the lenders mainly offer gold through time deposits and swaps. The gold-lending market (I don't know if I have to speak in the present or past tense, but I hope you forgive me when I continue in the present tense) is very one-sided: producers and the consignment industry are (or if you want: were) the main borrowers, while the official sector is *still* the main lender. Furthermore, the majority of demand for gold liquidity tends to borrow long and, till recently, the supply tended to lend only short. This is in contrast with a more natural two-way market in the currency interest markets. But I will try to elaborate on a few widely accepted faces of liquidity.

Tightness

A frequently used measure of tightness is the bid/ask spread. I make here a distinction between the quoted or the indicative spread and the realised spread. From my point of view, tightness is difficult to judge. As a natural lender, I operate mainly on the bid side of the market. In the daily emails I receive in which the bids and the offers are quoted, the spread is 20 basis points. It is my experience that is often possible to obtain a better bid rate than the rate indicated. But even then the spread remains much wider than the six basis points one observes e.g. in the dollar- or euro deposit markets. With today's short-term lease rates being so low, these spreads look relatively large, certainly percentage wise.

Despite the fact that I am not hired here today to defend the spreads, I would like to share with you some of my possible explanations about the size of these spreads. Notably when compared to the deposit markets of major currencies, the gold-lending market is a very small market with its own characteristics. In such a market it may be expected that it takes longer to lay off a position and this may require a larger spread.

Furthermore, wider spreads may also reflect in part the much greater volatility in gold interest rates compared to interest rates in currencies. I made some simple calculations about the volatility of gold lease rates and the dollar LIBOR rates over the past 12 years.

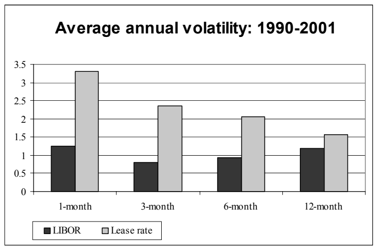
Table 1. Historic volatility* 1990 – 2001
(simple average of annual figures)

	1-month	3-month	6-month	12-month
LIBOR	1.26	0.80	0.94	1.19
Gold lease rate	3.30	2.36	2.06	1.56

* Volatility is here defined as 'the standard deviation of daily changes in interest rates*square root (360)'
Source $-LIBOR and lease rates: LBMA

I show the results here in a chart, because I was advised not to present slides with figures in a presentation after lunch.

Historic volatility 1990 - 2001



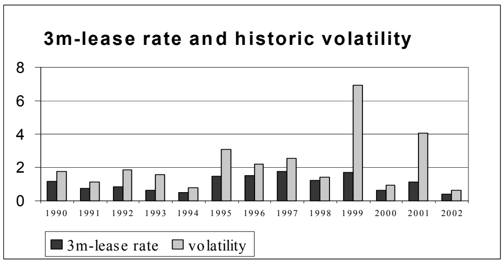
The average volatility for gold lease rates in the 12 year period 1990 – 2001 has been higher than the average volatility of the comparable $-LIBOR rates. You notice that the volatility converges as the tenors get longer. I guess without any consequences for the spreads. The higher volatility may not only partly explain the wider spreads, it tells us also that the trading liquidity in this market is poorer than in the dollar deposit market. By the way, this is not a surprising conclusion.

In the following chart / table I compare the average annual 3-month bid rate with the historic volatility. As you can see, higher lease rates tend to coincide with a higher volatility, lower rates with a lower volatility. This could indicate that spreads should vary somewhat with the absolute level of interest rates. Perhaps they do, but they haven't gone down aggressively in these days. Some of my friends in the market would probably observe: Jan, we also did not raise the spreads when the levels were higher.

Table 2. Average 3-month lease rate and historic volatility

	’90	’91	’92	’93	’94	’95	’96	’97	’98	’99	’00	’01	’02
Lease rate	1.16	0.72	0.83	0.65	0.47	1.48	1.52	1.75	1.24	1.92	0.61	1.12	0.38
Volatility	1.75	1.14	1.86	1.56	0.79	3.08	2.21	2.56	1.43	6.92	0.93	4.03	0.64

3-month lease rate and volatility



The lease rates are the simple averages of the LIBOR-GOFO minus a spread of 20 basis points. The definition of volatility is given under Table 1. The 2002 rates are from January up to and including April.
Source lease rates: LBMA

Instead of looking to the bid/offer spread, one can also look to the spreads between the bid rates of the different counterparts. I receive 8 emails daily from counterparts with bid indications. In late February and early March 2002, I monitored the differences in the indicated rates over a two-week period. I must underline that given the relatively short period the results should not be seen as representative for a longer period. On average, the difference between the highest and the lowest bid rate for the 1,2,3,6 and 12 months varied between 10 and 13 basis points. This is quite large. By the way, the average of the rates coincided quite well with the GOFO fixings. There was not a single counterpart systematically the lowest or the highest. However, it is not surprising that the banks with the highest credit rating were mostly in the lower part of the range.

My conclusion of this assessment is that the gold lease market is certainly not in the top of the liquidity league. However, given the nature of the market, one cannot expect too much. But let me be honest, it offered from time to time nice opportunities to the lenders so one should not complain too much.

Depth

Another way to assess market liquidity is to consider whether one can rapidly execute transactions with only a small impact on prices, or in other words: to what extent is it possible to lend deposits of a particular size without the rates moving against me? We have never really encountered problems, but I have to admit we never really tested the market by lending a large amount of fresh gold (e.g. 25 tons) in one shot. After we had increased our lending limit, we only gradually expanded the amount lent. New gold was distributed over different maturities and counterparts. DNB uses between 15 to 20 counterparts for gold lending and we try to avoid large maturing amounts on a single day.

Talking to colleagues, I get the impression that they act in the same vein. In conclusion, I am of the opinion that lending by individual central banks has hardly distorted the lease rates at short notice. This may have been different in the case of large hedging- or de-hedging operations by the producers. In the present circumstances, with declining demand, it is certainly not possible to lend a large amount of fresh gold without moving the rates further down, unless you lend it on the 1-month where the rate is already zero.

So, what do I conclude? When you take into account the size and characteristics of the market a gradual approach is already necessary under normal circumstances, for otherwise accidents will happen. After all, one cannot race through the streets of San Francisco during rush hour at 100 miles an hour.

Transparency

I also want to seize this opportunity to make a few remarks on the transparency of the gold lease market. In the currency markets (and now you can notice my monetary policy background), a monetary authority sets an interest rate, which is deemed necessary for an economy. All other interest rates take this rate, together with expectations about future monetary policy, as a starting point.

This is different in Goldland. The neutral interest rate (or if you want: the base rate) on gold is zero or even slightly negative, when you include the storage fees. Gold lease rates are subsequently fully determined by demand and supply. Rumours also reign in this market from time to time. I often observe that many bullion banks do not know exactly what is going on, or don’t want to tell you if they do. Producers have become more transparent on their hedging policies, but the larger operations are for obvious reasons disclosed only afterwards.

On the lending side transparency has also improved. In the September 1999 CBGA the signatories declared that they would not lend additional gold to the market (a transparency which at that time was not well understood). Two years later Giacomo Panizzutti released the amount lent by the signatories. Several central banks do disclose their lending volume. The Bank of England publishes the quantity of gold lent. In its latest Annual Report, the Swiss National Bank has not only disclosed the quantity lent on, but also the instruments used, remaining maturity and the yield on the gold investments.

In this speech I dealt with many of these aspects as far as the Nederlandsche Bank is concerned, except the yield on our gold investments. Our earnings on the invested gold portfolio in 2001 amounted to EUR 16 million, which is a yield of approximately 1.1%. The contribution of gold leasing in the total earnings of the Bank is however limited, approximately 1%. On the other hand, the contribution of the investments of the revenues of our gold sales has been a multiple of this amount and this makes our shareholder (the Dutch taxpayer) happy.

Conclusion

Our increase in the supply of gold liquidity over the past 20 years has always been a reaction to increased demand.

Or in other words: We seized opportunities the market offered us to earn some income on an asset, which was piled up in the vaults. It is not surprising that in the years 1995-1997, when lease rates were persistently on the high side, we experienced the largest expansion of our gold lending limit. Despite the fact that the revenues from gold leasing are only a small part of our total earnings, it has certainly not been negligible.

Given the size of the market and its characteristics, gold lease rates have been more volatile than interest rates on currencies. Therefore I conclude that the gold lease market is not in the top of the liquidity league, but I do not consider this a real problem. Now the demand for gold liquidity is shrinking and rates are declining, we will lend less gold to the market and will as a result lose some income, but that is the reality of the market one has to accept.

Therefore ladies and gentlemen, I am glad that I have been asked to address this conference now, because in the years ahead the gold lease market may shrink further and consequently our involvement in this market. Then there might not be anyone with enough experience anymore to deliver a central bank view on market liquidity. ■