

# Transformation of Banking Risks in Terms of New Basel Rules

Daria A. Dinets

Transport economic and management dept.  
Irkutsk state transport university, ISTU  
Irkutsk, Russian Federation  
e-mail: dinets\_da@irgups.ru

Konstantin A. Babenko

Financial markets dept.  
Plekhanov Russian University of Economics  
Moscow, Russian Federation  
e-mail: rixe91@mail.ru

**Abstract**— The article describes changes in international banking supervision rules and the impact of changes in the gold status in banking assets on the structure of banking risks. The assignment of a zero-risk level to gold and any other assets can increase the demand for precious metal and decrease a level of the bank capital. The article analyzes the dynamics of capital adequacy ratios and compares them with the dynamics of demand for gold coins and bullion. The recent trends in the gold markets are described. It was revealed that after the ratification of the Basel rules, the demand for gold decreased, and the metal left the assets of these funds. It was concluded that at the system level, the prevalence of gold-backed ETFs in the bank assets can increase liquidity risks

**Keywords**— bank capital, bank risks, gold, currency, index investment funds, liquidity

## I. INTRODUCTION

In spring of 2019, the new Basel banking supervision standards were ratified. The main innovation is the change in the status of gold in bank assets - the category of precious metal changed to the first one (a zero risk) which means that when weighed assets to determine the level of bank capital adequacy and quality, the weight ratio of gold and gold-backed assets is equal to zero. In other words, such assets do not require the bank's own capital.

Since the purpose of banking standards is to reduce systematic and individual banking risks (macro- and microprudential supervision, respectively) [1], it seems urgent to determine qualitative shifts in the complex set of banking risks. At the same time, analysts have not had a unified position on this issue.

## II. METHODS

The article uses the methods of vertical and horizontal analysis and identifies systemic relationships between different segments of the financial market. In addition, the methods of causal and concrete historical analysis were used. Based on the financial statistics data processing, a systematic study of the problem was carried out and short-term forecasts were developed.

## III. RESEARCH AND DISCUSSION

Firstly, the degree of bank capital adequacy should be analyzed (Fig. 1).

Saudi Arabia, Ireland, Argentina, the USA and Turkey have higher ratios of bank assets, Canada and most European countries have ratios lower than the global average, and in Russia, China and Switzerland, the ratios are close to the global average values while maintaining the general growth trends.

Let us compare the data in Figure 1 with the statistics on gold purchases by countries. According to worldstopexports.com, in 2018 the following countries were the main buyers of gold:

1. Switzerland: US\$63.3 billion (22% of total gold imports)
2. China: \$45.8 billion (15.9%)
3. India: \$31.8 billion (11.1%)
4. United Kingdom: \$25.6 billion (8.9%)
5. Hong Kong: \$23.6 billion (8.2%)
6. Singapore: \$13.5 billion (4.7%)
7. Thailand: \$11.4 billion (4%)
8. Turkey: \$11.3 billion (3.9%)
9. United Arab Emirates: \$10 billion (3.5%)
10. United States: \$9.6 billion (3.4%)
11. Cambodia: \$5.7 billion (2%)
12. Canada: \$4.8 billion (1.7%)
13. Australia: \$4.6 billion (1.6%)
14. Germany: \$4.6 billion (1.6%)
15. Italy: \$4 billion (1.4%)

Their total purchases are 93.8% of all operations in the precious metal markets.

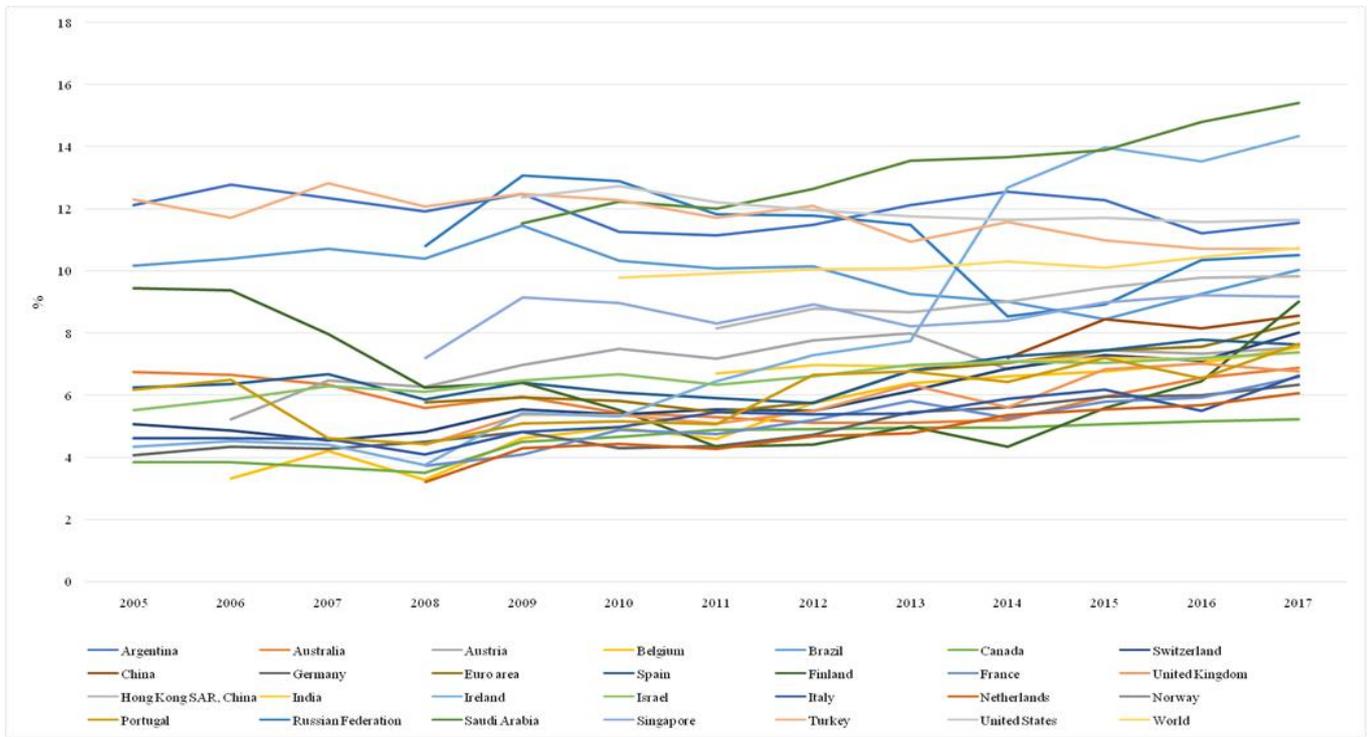


Fig 1. Dynamics of capital adequacy ratios [2]

Many of these countries are leaders in gold exports over the same period [3]:

1. Switzerland: US\$64 billion (21.9% of total gold exports)
2. Hong Kong: \$37.2 billion (12.8%)
3. United Kingdom: \$31.8 billion (10.9%)
4. United States: \$20.3 billion (7%)
5. Australia: \$14.2 billion (4.9%)
6. Canada: \$12.3 billion (4.2%)
7. Singapore: \$11.1 billion (3.8%)
8. United Arab Emirates: \$10.6 billion (3.6%)
9. Peru: \$7 billion (2.4%)
10. Japan: \$6.3 billion (2.2%)
11. Ghana: \$6.1 billion (2.1%)
12. South Africa: \$5.5 billion (1.9%)
13. Germany: \$4.6 billion (1.6%)
14. Thailand: \$4.4 billion (1.5%)

15. Mexico: \$4.3 billion (1.5%)

What conclusion can be made from the above analysis? Excluding the gold mining countries, we can see that according to the results of 2018, China, India and Turkey are net gold importers [4]. The motives of these countries are not associated with banking risks. The use of national currencies and formation of a gold reserve to ensure payments are the most probable motives for China and India; as for Turkey, it supplies gold to Iran. In addition, countries exhibiting demand for gold can be characterized as having an above average bank capital adequacy ratio.

The data on the gold supply and demand show gross values, regardless of the purpose of purchases. If we are talking about banking risks, the demand for gold bullion and coins should be taken into account ignoring the needs for the production of jewelry and the use of gold in industry. Data on the structure of demand for gold bullion and coins are presented in Table 1.

TABLE I. COIN AND BAR DEMAND [4]

Country	Demand								
	2010	2011	2012	2013	2014	2015	2016	2017	2018
India	340.1	354.7	319.0	341.2	206.0	194.9	161.6	169.3	162
Pakistan	7.4	15.7	13.2	20.9	13.9	14.5	16.0	16.9	14
Greater China	183.6	266.4	264.0	418.1	208.2	236.0	291.8	313.8	315
China, P.R. Mainland	183.8	259.1	257.0	406.7	198.5	228.1	284.6	306.4	308
Hong Kong SAR	1.2	1.5	2.0	2.9	1.4	1.5	1.4	1.7	1.8
Taiwan Province of China	-1.4	5.8	5.0	8.5	8.3	6.4	5.9	5.8	5.3
Japan	-39.8	-52.3	-11.0	3.9	-2.7	16.2	17.1	-3.3	12.1
Malaysia	5.5	9.8	7.7	10.3	8.2	6.8	5.2	5.8	6.3
Singapore	1.4	4.2	5.1	6.5	6.5	5.9	5.0	4.8	4.5
Korea, Republic of	1.3	7.9	11.3	17.7	16.3	19.4	14.4	17.7	17.0
Thailand	64.2	106.6	100.9	138.9	96.4	78.0	69.7	64.0	68.0
Vietnam	68.2	90.6	73.8	87.9	54.2	47.8	42.9	37.4	41.2
Middle East	72.9	88.4	90.6	111.2	74.9	64.9	30.0	43.2	86.1
Saudi Arabia	14.5	17.7	16.9	18.3	15.6	14.9	10.8	9.9	10.1
UAE	10.0	11.9	10.7	14.1	9.9	8.7	6.0	5.5	5.3
Kuwait	1.4	1.3	1.6	3.8	3.6	3.0	2.5	2.6	3.6
Egypt	2.3	2.3	2.1	7.1	6.0	4.9	2.7	2.5	2.6
Islamic Republic of Iran	43.5	53.2	57.0	64.0	36.1	30.1	4.6	19.2	61.0
Other Middle East	1.3	2.0	2.3	3.9	3.6	3.2	3.4	3.5	3.2
Turkey	40.9	71.9	48.1	104.2	48.6	23.1	29.4	52.4	37.1
Russian Federation	0	0	0	0	7.9	4.8	3.7	3.1	2.8
Americas	113.2	92.4	61.6	85.6	56.1	78.2	98.8	41.8	33.0
United States	104.4	82.6	53.1	75.3	48.2	71.1	91.1	35.2	28.0
Canada	3.7	5.9	4.4	6.4	4.4	3.4	4.1	2.9	2.3
Mexiko	4.7	2.9	3.1	2.5	2.2	2.4	2.3	2.7	2.6
Brazil	0.5	0.9	1.0	1.4	1.3	1.4	1.3	1.0	0.5
Europe ex CIS	288.3	334.0	239.8	261.2	196.3	220.2	201.9	192.4	172.4
France	1.3	6.5	2.7	1.9	1.0	-0.5	-4.2	-0.1	-1.0
Germany	122.9	142.4	108.2	133.3	101.3	116.0	110.8	106.5	96.1
United Kindom	14.9	17.6	14.9	11.3	7.5	8.5	11.9	10.4	11.0

The leaders are China which does not hide its motives for reducing the dollar dependence, India, Iran, Turkey, the ASEAN countries and Germany. Regarding the latter, it

should be noted that attempts to stabilize the EU currency system and use national currencies in foreign trade have been on the agenda of the largest European economy. The end of the Brexit process can contribute to this trend. This is confirmed by the beginning of negotiations, including with Russia on the use of national currencies in the trade in raw materials with the EU.

Therefore, there was no excitement in the analysis of supply and demand in the gold markets before the ratification of Basel rules; all operations are caused by geopolitical and speculative motives. The official gold reserves are quite stable (Fig. 2)



Fig 2. Dynamics of gold reserves [5]

The statistics allows for the conclusion that macroprudential banking supervision innovations correspond to a macro level and institutionalize gold monetization trends that have already emerged in the world in order to suppress the dependence on the toxic American financial market.

However, this rhetoric does not correspond to the issue under study. Let us analyze possible interaction between the gold markets and the world banking system. In addition to reserves, gold accounts and other traditional operations, banks are involved in trading gold ETFs, which are risk-free assets, as they are secured by gold reserves. The gold ETF is a stock exchange investment fund whose investors invest their funds (most often in dollars) in order to obtain profits from rising gold prices. However, the structure of the fund is unknown, and the exact size of the gold reserves may vary from 5 to 40% of the total value of the fund. The remainder of the fund is in derivative financial instruments. In particular, the Moscow Exchange offers its customers a gold fund based on a swap concluded with the UBS for the price of gold on the London Stock Exchange. This means that the fund pays a certain fixed value to the UBS receiving a rate corresponding to an increase in gold prices. No metal accounts are opened, and the cost of servicing such a fund is minimal. If a bank invests in this fund, the risks are equal to zero. Let us consider the statistics on the dynamics of investments in gold ETFs (Fig. 3)

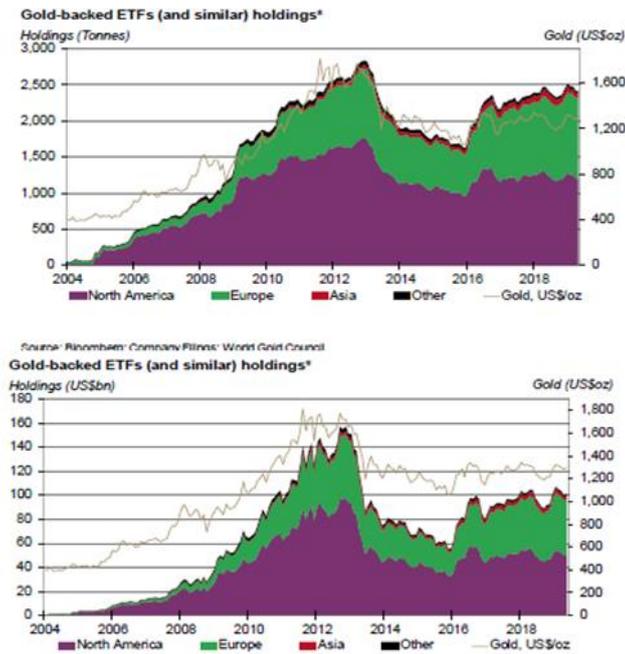


Fig 3. Dynamics of gold-backed ETF accumulation [6,7,8]

The funds representing the banking sector in gold markets are increasing the level of gold accumulation, providing the depth of exchange trading in gold. However, such operations are a tool for managing liquidity rather than bank risk management. Let us consider the reaction of ETFs to increasing the status of gold in banking assets (Fig. 4)

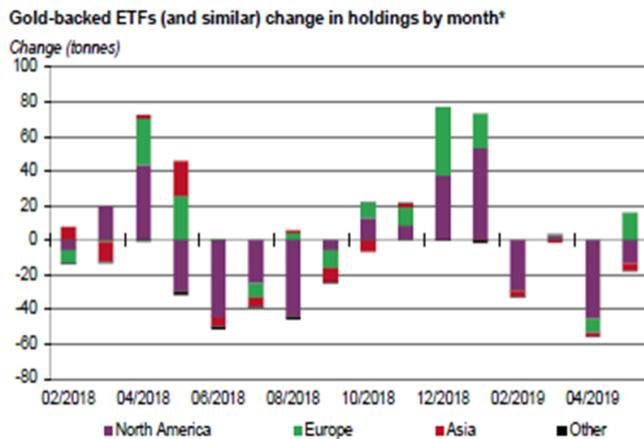


Fig 4. Dynamics of changes in gold-backed ETF assets [6,7,8]

The reaction to the changing gold status in April 2019 contradicts expectations of analysts - an outflow of metal from the assets was observed in the North American markets. This inconsistency can be due to the outflow of gold caused by a rise in prices, or tactics of American bankers; the use of real gold as a result of ratification of the Basel rules became unnecessary for assigning a zero risk level to the asset. The American funds systematically reduce the gold reserves of their funds, since it is possible to carry out operations with funds with a zero risk level at a lower cost.

There is one more possible reason: due to the intentions of many countries to abandon the dollar as a currency of international payments, a change in the status of gold and a systematic reduction in the gold reserves may be a sign of a controlled and provoked US bubble in the gold market. Despite the fact that such an option can be attributed to conspiracy theories, one cannot deny the possibility of its implementation. The demand for gold cannot but alarm the United States. At the same time, the simplest and relatively cheapest way to change the situation is a collapse of the gold market. Unlike mortgages, gold is not a socially significant tool, and a collapse will not affect the poorest segments of the population.

The mechanism is as follows: gold funds are declared fully risk-free assets, while the content of real gold is always at the discretion of the fund. Banks find a way to reduce the price of transactions with similar funds in reducing the gold content; as a result, the profitability is growing, a financial bubble appears, which, with a further reduction in the gold content, leads to a crisis and a collapse in world gold prices. The metal is discredited, the dollar is considered as a risk-free asset. We believe that such a scenario cannot be completely discounted. It is significant that before this, gold-backed ETFs reduced in 2013 - at the peak of world oil prices. It is advisable for the American economy to maintain a constant level of oil prices expressed in gold, whereas in 2013-2014, these ratios were out of trend. Thus, a reduction in the gold content could be used to increase the profitability of funds even with an unfavorable ratio of prices to a competing stock asset. To illustrate, let us present data on the dynamics of gold prices expressed in different currencies and in oil prices (Fig. 5)

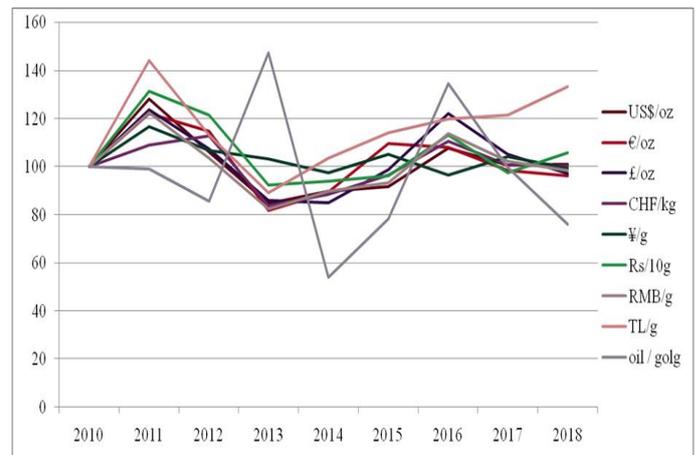


Fig 5. Gold price growth rates, % [9, 10, 11, 12]

#### IV. CONCLUSIONS

Indeed, the dynamics is generally unidirectional, with the exception of 2013-2014, preceding a controlled drop in oil prices. The trend of 2019-2020 may be the opposite of the situation in 2013 and accompanied by an increase in risks in gold operations contrary to the declared goals. By 2019, the price of gold in lira, rubles and pounds is significantly higher than the price in dollars.

We can conclude that operations with risk-free assets secured by gold can cause an agiotage in the gold-backed ETF market and a banking sector liquidity crisis. The declared goal of increasing the stability of the banking system may become a source of its uncontrollability.

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