



Determinant Matrix for Gold Monetization Scheme (GMS) and Household Preferences for Gold-Backed Products in Himachal Pradesh, India

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(Received 22 February 2020, Revised 03 April 2020, Accepted 06 April 2020)

(Published by Research Trend, Website: www.researchtrend.net)

ABSTRACT: India, with an average annual demand of 800 tonnes and some 23-24,000 tonnes of gold lying unproductive with the households and religious institutions, is the 3rd largest importer of gold in the world. Much of the gold used for jewelry goes out of circulation and is not available for further economic activities, making India a net importer of gold, which adversely affects the Current Account Deficit (CAD).

The government of India is attempting to reduce gold import and also to bring unproductive gold back into circulation. Launching of different gold-related schemes like Gold Exchange Traded Funds (Gold ETF), Gold Monetization Scheme (GMS), Sovereign Gold Bond Scheme (SGBS), and Indian Gold Coin/Bar Scheme (IGCBS) are some of the steps in this direction. Constrained by their decision-making environments, different people attach different levels of importance to these schemes. This study attempts to find out the households' investment preferences for gold-backed products by conducting a survey in a culturally rich Himalayan state, Himachal Pradesh, in India. The study is aimed at ascertaining the associations between the level of investment in products mentioned above and different socio-demographic variables. The study will help policymakers formulate the right strategies to reach the target consumers of gold-backed products in a much better way. These strategies will not only help in designing appropriate awareness campaigns but also focus on allaying the fears of ordinary people in disclosing the family gold holdings. Such a plan will gradually popularize the gold-backed schemes and thus will help in achieving the desired success.

The study revealed that the majority of the households prefer GMS with long term Bank Deposits, and SGBS for the perceived safe and stable returns. Gold ETF is fast catching up with GMS and SGBS. The results suggest that in the extended run, households would prefer Gold ETFs for its quality of providing a combination of safety, stability, and ease of trading benefits through the stock market. Most of the respondents opined that the government must step up the awareness creation programs and also enhance the financial literacy of people for better inclusion of gold-backed products in personal wealth management.

Keywords: Gold Monetization Scheme, Gold ETF, Sovereign Gold Bond, Indian Gold Coin/ Bar, Bullion, Preference, Association, Annual Income, SEBI.

Abbreviations: GMS, Gold Monetization Scheme; CAD, Current Account Deficit; ETF, Exchange Traded Fund; SGBS, Sovereign Gold Bond Scheme; IGCBS, Indian Gold Coin/Bar Scheme; NITI, National Institution for Transforming India; WGC, World Gold Council; GOI, Government of India; RBI, Reserve Bank of India; NBFC, Non-Banking Company; GML, Gold Metal Loan; GDS, Gold Deposit Scheme; SEBI, Securities and Exchange Board of India; NSE, National Stock Exchange of India; BSE, Bombay Stock Exchange of India; INR, Indian National Rupee; BIS, Bureau of Indian Standards; LBMA, London Bullion Market Association; SOP, Standard Operating Procedure; CPTC, Collection and Purity Testing Center; FICCI, Federation of Indian chambers of commerce & industry; the USA, United States of America; PRICE, People Research on India's Consumer Economy; SPSS, Statistical Package for the Social Sciences; ADI, Annual Disposable Income; PG, Postgraduate; SG, Suggestion Group.

I. INTRODUCTION

Gold purchases are almost a tradition with Indians for reasons of many cultural traditions and economic considerations. Purchase or gifting of gold /gold jewelry to near-and-dears on the occasion of the birth of a child, marriages, any achievement by a family member, or other such occasions and as offering to deities is a common observation. Whether it is for investment or meeting social obligations, gold is an essential part of the equation. However, the amount of purchase depends on many socio-cultural and economic factors like family structure, time of purchase, the closeness of the relation, family status, and family income, etc.

Globally, India, with an annual demand of around 800 tonnes, is the second-largest gold consuming market and accounts for around 25 percent of the world's gold

demand (Gold, 2016) [1]. With such an annual appetite, India is the 3rd largest importer of the gold in the world [2]. NITI Aayog (2018) estimates that around 23,000-24,000 tonnes of gold lie unproductive with the households and religious institutions (Government of India, 2016) in the country [3]. World Gold Council through its annual report stated that this gold is approximately 12% of all the above-ground gold available worldwide [4].

Fergal *et al.*, (2015) concluded that excepting the time periods with state restrictions, the demand for gold has not shown any respite in India, even with gold prices showing an ever-increasing trend [5]. Much of the gold that is consumed goes out of circulation and is not available for further economic activity. One of the consequences of this steadfast affinity and high consumption of gold is that India is a net importer of

gold, which adversely affects the Current Account Deficit [6]. The RBI through 'Report of the Working Group to Study the Issues Related to Gold Imports and Gold Loans NBFCs in India' recommended moderation of gold imports [7]. WGC declared that the average annual data for last five years in India on total gold imports show that 80 percent of gold was used for fabrication of gold jewelry and coins, around 2.5 percent in ETFs, 1.4 percent for industry use and only balance of 16.1 percent is held as bullion for investment [8].

Intending to reduce import of gold the government had implemented several policies like Gold Control Act, 1962 and 1968, Gold Metal Loan Scheme (GML), 1998, Gold Deposit Scheme (GDS), 1999, Gold Exchange Traded Funds, 2007, Gold Monetization Scheme, 2015, (Government of India, Union Budget, 2015-16), Sovereign Gold Bond Scheme (SGBS), 2015 and India Gold Coin/Bar Scheme (IGCBS), 2015. Certain salient features of the schemes mentioned above are briefly described hereunder.

A. Gold Monetization Scheme (GMS)

The government of India through Union Budget (2015-16) announced launch of gold monetization and other schemes [9]. And later through RBI launched Gold Monetization Scheme to mobilize and utilize idle gold lying with households and religious institutions for productive purposes in the economy [10]. It can be availed in the following tenures.

- Short-Term: 1-3 years and the interest rate at the discretion of banks offering the scheme
- Medium-Term: 5-7 years and interest rate - 2.25 percent p.a.
- Long-term: 12-15 years and interest rate - 2.75 percent p.a.

Unlike the Gold Deposit Scheme, the interest rate in Gold Monetization Scheme applies to the volume of gold deposited rather than on its rupee value.

B. Gold Exchange Traded Funds (ETFs)

In the wake of increasing fiscal deficit, especially due to the import of gold, India sanctioned the trading of gold exchange-traded funds (SEBI, 2006) [11]. Benchmark Asset Management Company, a Mumbai based Mutual Fund House, launched Gold BeES, the first gold ETF of India in 2007. It is an alternate way of owning gold more cost-effectively through a stock exchange; National Stock Exchange (NSE) and Bombay Stock Exchange (BSE), with gold as the underlying asset. Presently, the retail investors in India have an option to buy gold ETFs in smaller units, like one gram (sometimes even half of a gram), without the requirement of its storage and safety-related issues. ETFs and other dematerialized forms of gold are becoming a preferred asset class for gold investments in the country. Some features & benefits of Gold ETFs are given underneath.

- The flexibility of transaction through NSE and Demat form
- Flexibility of transaction through NSC and Demat form
- High liquidity as they can be traded on a real-time basis
- Ease of participation in the gold market as the platform is transparent
- Easy to hold for long without any risk of being stolen
- Tax-efficient as tax is levied only on long-term capital gains
- Cost-effective as there are no mark-ups.

C. Sovereign Gold Bond Scheme (SGBS)

Sovereign Gold Bond Scheme was launched by RBI

[12]. These gold bonds are government securities denominated in grammage of gold. Although they are bought against Indian National Rupee (INR), but these are substitutes for holding physical gold.

- The bonds are available both in Demat and paper form
- Tenure of 8 years with a minimum lock-in period of 5 years
- The interest rate of 2.75 percent p.a. on buying paper bonds
- Returns are directly linked to the market price of gold
- Gold bonds are issued in 1, 2, 5, 10, 50, 100, 500 grams of gold
- The RBI issues the guarantee for the payment on behalf of the Government of India.

D. Indian Gold Coin/Bar Scheme (IGCBS)

Along with SGBS and GMS, the government of India launched the Indian Gold Coin/Bar Scheme too (RBI, 2015c) [13]. The scheme provides Gold Coins and Bars produced from the gold collected through Gold Monetization Scheme. The IGCB scheme, among others, has three main benefits (i) it is expected to reduce the demand for gold imports, (ii) will enhance the success of the GMS, and (iii) it supports the "Make in India" initiative as these coins are indigenously minted.

- The coins are of 24-carat purity with 999 fineness
- Hallmarked as per BIS standards
- The coins are available in denominations of 5 and 10 grams, and a 20-gram bar/bullion is also available
- The tamper-proof packaging and advanced anti-counterfeit features on the coin cover make it very safe and easily recyclable.

The GMS focuses on tapping the household and institutional (religious bodies, etc.) gold holdings within the country, whereas other gold-backed schemes like Gold ETF, SGBS and IGCBS focus on providing investors the returns which track gold prices on a real-time basis. These schemes are substitutes for investors who buy gold jewelry for the safety and stability of returns. Also, these schemes provide other benefits as they can serve as a mortgage against a loan or long term future returns and capital gains. For the success of these policies, it is imperative to measure the present household preferences and identify the variables that influence investors' buying behavior. The present study revolves around the following two objectives:

- To find out household investment preferences for various Gold-backed Schemes, with a particular reference to Gold Monetization Scheme and Gold Exchange Traded Funds in Himachal Pradesh, India
- To ascertain the determinant variable matrix responsible for buying behavior towards Gold Monetization Scheme and Gold Exchange Traded Funds.

II. REVIEW OF LITERATURE

Narayanan *et al.*, (2017), through their research study, not only viewed India's Gold Monetization policy through the lens of consumer associations with gold but also looked from the perspectives of the bankers and refiners concerning the challenges in the implementation of the policy. The analysis, *inter alia*, showed that the propensity to avail gold monetization scheme is positively correlated with the proportion of females in the household and also with several daughters in the household [14].

Research further showed that the effectiveness of the Gold Monetization Scheme depends on a deeper understanding of consumers' sentiments towards gold.

Tsetsos *et al.*, (2015) commented that the attraction towards gold is highly prevalent among masses, the middle and lower-income classes, who tend to consider the gold monetization scheme to be superior to nearly all other investment vehicles, and are often highly influenced by elders of the family [15]. This is because GMS provides an option to get the principal and return in terms of gold bullion on maturity.

Kaur and Virani (2017) in their study on “Gold Monetization Scheme - Old Wine in New Bottle”, summarized that gold monetization within the nation is essential for macroeconomic stability, but it requires a sound scheme for valuing, storing, and tracking the metal [16]. The study further stated that it appears that the various intricacies, such as the tripartite agreement between refiners, banks, and collection centers involved in the process, makes implementation a challenge. Also, to expect households to actively participate in any scheme that involves “melting” of the long-preserved jewelry with some sentimental value at the outset seems to be a fallacy.

The research findings of Deepak (2016) fall parallel with the views of the industry, according to which BIS (Bureau of Indian Standards) authorized Hallmarking Centers are not reliable in terms of the quality [17]. The Economic Times (Nov 6, 2015) published that close to 70 percent of the hallmarked jewelry fails to conform to its marking standards [18].

Singh *et al.*, (2017) through their study entitled ‘How to Make the Gold Monetization Scheme Successful?’ showed that more than 80 percent of respondents felt that they would support GMS if they are made assured that monetized gold would be used for social welfare [19]. The study further reflected that more than 50 percent of respondents desired, the gold within religious institutions used for adorning deities and for decoration of the place of worship should not be monetized. The study provides some key insights such as; (i) lack of awareness about GMS, etc. in public, (ii) fear of getting questioned by tax authorities about inherited gold, (iii) lack of trust on purification and testing agencies, (iv) Conversion of gold into cash not being immediate, (v) variation in rates offered to jewelers by the banks, (vi) insufficient number of LBMA (London Bullion Market Association) certified refineries, (vii) economic viability of the scheme for banks is debatable, (viii) lack of a Standard Operating Procedure (SOP) for banks, (ix) Lack of CPTCs (Collection and Purity Testing Centers) across India, (x) personal and religious sentiments around melting of deposited gold articles, (xi) taxation related concerns of religious bodies and (xii) poor marketing and communication of the schemes.

Raghavan and Ahmed (2011), through their study, brought out that household expenditure on gold jewelry and gold investment in India will keep on going up in the long run due to wealth accumulating motives [20]. FICCI-WGC (2014), in their report, said that just over 17 percent of respondents invested in gold deposit schemes, gold coins and bullion, paper gold, and gold accumulation plans. These products were significantly more attractive than bonds, mutual funds, and even insurance policies among these investors [21]. Towards the success of all gold-backed products, this is certainly a very encouraging finding.

Thies (2005) found that during silver agitation in the USA, Gold Bonds provided necessary protection to all investors against uncertainty. Gold Bonds were not only sold at a premium but were very effective in lowering the overall cost of capital [22]. And India would certainly like to emulate such a brilliant performance.

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Avabruth *et al.*, (2015) concluded that because of governmental protection, Sovereign Gold Bond Scheme (SGBS) in India offers very high safety and security [23]. The study further concluded that after physical gold and gold ETF, SGBs are the next most preferred investment option. Chaudhary Kajal and S S (2017) observed that Indians are emotionally attached to gold and consider it a symbol of social status too [24]. Kundu Tadi observed that such a sentiment is one of the biggest hindrances in the adoption of GMS, Livemint, (2019) [25]. Verma *et al.*, (2020) in a study conducted in Himachal Pradesh reported that about 93 percent of households preferred gold jewelry as an investment which was a close 2nd preference after bank deposits [26]. Chaudhary and Bakshi (2016) studied the motives, challenges, and levels of progress about GMS and other gold-backed products in India and stated that the short-term results could not give any conclusive findings [27]. It needs more time to give any substantial outcome because unless some patterns become visible and stable, nothing can be generalized. Nawas and Sudindra (2013) discussed that many investors prefer gold coins and gold ETFs over other products [28].

Sudindra and Naidu (2019) studied the performance of SGBs and other forms of gold-backed investment instruments and found that SGBs were considered superior to other forms [29]. SGBs have lower purchase price (as Gol offers a rebate of INR 50 on online purchase), stable returns, estimated higher equalized annual returns, higher safety, better ease of trading, capital appreciation as good as that of gold jewelry, and ability to serve as collateral against the loan. The study went on concluding that towards a balanced investment portfolio, people with a stable and regular income should invest between 2 and 5 percent, and others should put up to 10 percent into SGBs.

A study conducted by ICE 360° meant for People Research on India's Consumer Economy (PRICE) on “Why the gold monetization initiative is failing to enthuse Indians,” exclusively reported by Tadi Kundu (Livemint, May 2019) [25] stated that low returns, lack of awareness and a fetish for hoarding the yellow metal (gold) in the country seem to have led to the tepid response to the gold monetization initiative. One reason why many households are unwilling to park their gold in banks is the low-interest rates on offer. The study reflected that relatively speaking, people who are highly educated and wealthier households showed slightly more willingness to park their favorite metal with banks. It is, therefore, suggested that the lack of adequate information or understanding about the gold monetization and other schemes could, in part, be responsible for the lukewarm response. However, even among the wealthy and educated lot, most of the households were not too enthused about the idea of depositing their gold holdings in banks. Fifty-four percent of households headed by a graduate were either undecided or not in favor of parking their gold holdings in a bank. Among households with no formal education (which are also poorer on average), 72 percent were either undecided or against gold monetization schemes.

While Indians seem unwilling to part with their gold in return for interest, they do use it as collateral against loans. While the richer households were more likely to obtain loans against gold from the bank, the poorer households or those engaged in agricultural labor were more likely to obtain loans against gold from a moneylender or a jeweler than from a bank. Sentimental

value is the most affecting factor which is holding back people from opting for the government's scheme to monetize their gold as nearly three-fourth of India's gold stock is held in the form of jewelry. There is also a gender aspect to it, as gold in the form of jewelry (usually called Streedhan) allows women some sort of control over ownership and inheritance.

World Gold Outlook Report (WGC, 2020), pointed out that gold ownership is higher in rural India than in urban India [30]. However, the ICE 360° survey shows that the incremental demand for gold is higher in urban areas, whereas most of the gold jewelry held by rural India is kept as a store of wealth. The survey results suggested that not only were urban households more likely to spend on gold, but they were also likely to spend relatively more on it [25].

The twin engines of economic growth and urbanization, which often lower people's dependence on physical forms of savings by providing greater access to financial securities, seem to have failed to temper Indians' thirst for gold. It seems the government has not been able to understand the behavior of gold consumers comprehensively. Additional efforts are needed in this regard to understand the determinant matrix of socio-demographic and other variables to come out with more suitable and acceptable products.

III. RESEARCH METHODOLOGY

An exploratory study with both quantitative and qualitative approaches was undertaken to ascertain the determinant matrix of independent variables affecting investment into gold monetization and other gold-backed schemes. The study further aimed at deciding the households' preferences, reasoning out the differences, and finally providing some recommendations to improve GMS in India. The study was undertaken in a purposively selected state of Himachal Pradesh in India as no such study was previously done for this Himalayan state. To assess households' investment preferences for gold-backed products, a statistically significant sample of households was selected from 5 districts chosen from 10 urban districts through a multistage random sampling technique [31].

After discounting a set of five erroneous questionnaires, the study ultimately presented its findings based on the analysis of 995 sample respondents. Primary data were collected from the head of the household or the decision-maker with the help of a self-administered questionnaire through an in-person interaction approach. Primary data, among other things, captured information on the socio-economic and demographic characteristics of the respondents. It further collected information on the investments made by them in gold-backed products such as GMS and gold ETFs, among other avenues for investment. Data were processed with the help of Statistical Package for the Social Sciences (SPSS), Version 26 and MS Excel Descriptive and inferential statistics with Chi-square test have been used to arrive at different results.

IV. RESULTS AND DISCUSSION

The present study investigates households' preferences for various investment options such as Gold Monetization Scheme, gold ETF, and other gold-backed investment schemes concerning socio-demographic variables in Himachal Pradesh. Socio-demographic variables, as shown in Table 1, include locality, gender,

marital status, age, educational qualification, family structure, family size, number of earning members, annual family income, source of family income, level of awareness, stage of the life cycle, and risk attitude, etc. Analysis of data showed that 1/3rd of the households headed by males preferred long term GMS, Gold Coin/Bar Scheme as the 2nd preference closely followed at 3rd position is Sovereign Gold Bond Scheme. It means male's investment for the long term may be due to concern for the future. Ladies' highest preference to SGB, the safest Gold-Backed alternative, indicates their mindset for safety, which enforces the finding of Sudindra and Naidu (2019) [29]. Married people followed suit. Undergraduate made most of the investment and chose SGBs as the top priority. People above 30 years but below 50 years preferred GMS with long term view and SGBs as the next best alternative. Most of the families preferred medium to long term gold monetization schemes and did not like gold ETF much. This may mean, people, are not yet ready for stock trading.

Households with ADI of INR 6.1 to 8.0 Hundred Thousand chose long term GMS as the 1st choice and SGB as 2nd. Families with Agriculture and Horticulture as the income sources tend to receive stable and regular returns with long term security, and thus chose long term GMS. GMS with Short Term Deposits is the least preferred, maybe because the interest rates offered to, vary from bank to bank, and investors do not feel sufficiently confident of the best deal.

In order to find out the household preferences for different investment options, a total of six, were presented to the respondents. Response on each of the investment options was recorded for three categories, viz., (i) less than 10 percent, (ii) 10-20 percent and (iii) 20-30 percent of family's annual disposable income (ADI) spent thereon. Categories of ADI are kept in terms of percentages and not in terms of the absolute value, as comparison becomes logical and straightforward for computing the preferences without any biases, as shown in Table 2.

Household's preferences are computed by the relative proportion of sample respondents, and the instrument which gets the most significant proportion is the most preferred option. The preferences for each of the category is shown separately in Table 3.

A. Preferences for Gold Monetization and other Gold Backed Schemes

It is seen from Table 3 that in 'Less Than 10 percent' of ADI, households gave 1st preference to the Long Term (12-15 years) Deposit of Gold Monetization Scheme, which is closely followed by Sovereign Gold Bond Scheme at 2nd place. Gold ETF and India Gold Coin/Bar Scheme are tied at 4th priority. Verma *et al.*, (2020) substantiated that people here in Himachal Pradesh are still not ready to operate Demat accounts and transacting through the stock exchange [26]. GMS-Short Term Deposit is the least preferred category. Every scheme has a fixed lock-in period, and long-term schemes with more extended lock-in periods have more considerable uncertainties. It means more considerable the lock-in periods, larger the uncertainties hence more significant the level of risk involved. There is always a set of people called early adopters (those who have an experimenting nature) and given a choice would like to take a calculated risk.

Table 1: Socio-demographic Variables and Sub-variables.

S.No.	Socio-demographic variables	Sub-variables
1.	Locality (Administrative Area)	Municipal Corporation, Municipal Council Cantonment Board, Nagar Panchayat
2.	Sex	Male, Female
3.	Marital Status	Married, Unmarried, No formal education
4.	Educational Qualifications	Up to +2 Graduate PG & above
5.	Age (years)	Up to 21 22-30 31-40 41-50 Above 50
6.	Family Structure	Nuclear Joint
7.	Family Size (No.)	Up to 3 4 – 5 Above 5
8.	Males in the Family (No.)	1 2 3 4 5 6 7 8 9
9.	Females in the Family (No.)	0 1 2 3 4 5 6 7 8 9
10.	Earning Members (No.)	1 2 3 4 5 6 Above 6
11.	Family's Annual Disposable Income (Rs Hundred Thousand)	Up to 2 2.1 – 4 4.1 – 6 6.1 – 8 8.1 – 10 Above 10
12.	Stage of Life Cycle	Bachelor stage A young married couple with no children A young married couple with children A young or middle-aged person with dependent children (the single parents) A divorced person without dependent children A middle-aged married couple without children The middle-aged married couple still with dependent children An older married couple with no children / with no children living with them Older single people, still working or retired
13.	Source of Family Income (Multiple Responses)	Government Sector Job Private Sector Job Farming (Mainly Agriculture) Farming (Mainly Horticulture) Own Business Daily Wage
14.	Investor's Risk Attitude	Risk-averse Risk-neutral Risk-seeker

Table 2: Distribution of Respondents about Gold-Backed Schemes.

S. No.	Gold Monetization or Gold Backed Scheme	Percentage of Households				Total (%)
		Percentage of ADI Spent				
		Nil	<10	10-20	20-30	
1.	GMS - Short Term Bank Deposit	10.6	17.3	56.4	15.8	100
2.	GMS - Medium Term Bank Deposit	10.6	34.5	51.2	3.8	100
3.	GMS - Long Term Bank Deposit	10.6	43.1	38.7	7.6	100
4.	Sovereign Gold Bond Scheme	10.6	39.8	39.4	10.3	100
5.	Gold ETFs	10.6	24.7	54.5	10.3	100
6.	India Gold Coin/Bar Scheme	10.6	24.7	54.5	10.3	100

These people are usually classified as Risk-seekers which as per Table 6 are about 8 percent (highest in this category for less than 10 percent of ADI) for Long Term Bank Deposits. Further Table 4 and 5 reveal that out of 43.1 percent investors for long term Deposits, 20.8 percent are Risk-averse, and 14.5 percent are Risk-neutral investors. This may be because there is no fixed interest rate in short term deposits as the decision revolves around the discretion of the banks providing GMS facility. So, no clear-cut picture is available for

comparison. Now between medium-term and long term deposit schemes, the more substantial rate of return (2.5 percent p. a.) is provided by the long term deposit schemes hence; naturally, people moved towards it. Almost half of the respondents are Risk-averse, one 3rd is Risk-neutral, and the rest of the population is Risk-seekers. The data shows that most of the households are risk-averse as their investment pattern is tilted in favor of investment avenues that provide safe and stable returns.

Table 3: Household' Preferences for Gold-Backed Schemes for all Categories of ADI.

S. No.	Gold Monetization and other Gold-Backed Schemes	Households' Preferences		
		< 10% of ADI	10-20 % of ADI	20-30 % of ADI
1.	GMS-Long Term Bank Deposit	1	5	3
2.	Gold Sovereign Bond Scheme	2	4	2
3.	GMS-Medium Term Bank Deposit	3	3	4
4.	Gold ETFs	4	2	2
5.	India Gold Coin/Bar Scheme	4	2	2
6.	GMS-Short Term Bank Deposit	5	1	1

Table 4: ADI Spend-wise Sample Distribution of Risk-averse Investors.

S.No.	Gold Monetization and other Gold-Backed Schemes	The proportion of Risk-averse Investors		
		Percentage of ADI Spent		
		<10	10-20	20-30
1.	GMS-Short Term Bank Deposit	7.8	27.4	9.7
2.	GMS-Medium Term Bank Deposit	16.8	25.8	2.4
3.	GMS-Long Term Bank Deposit	20.8	19.3	4.9
4.	Sovereign Gold Bond Scheme	18.8	20.7	5.5
5.	Gold ETFs	10.5	26.8	7.7
6.	India Gold Coin/Bar Scheme	24.3	17.9	2.8

Risk-averse investors always try to maximize the return per unit of risk, and here in 'Less than 10 percent' category prefer gold coin/bar the most, followed by GMS- Long Term Bank Deposits and Sovereign Gold Bonds (SGBs). Investors in '10-20 percent' of ADI gave GMS-Short Term Bank Deposits as the 1st preference and 2nd preference to gold ETF. In '20-30 percent' GMS-Short Term has 1st preference, 2nd to gold ETF, and 3rd preference to SGBs. SGBs provide better equalized annual returns and hence got preferred by people as Nawas *et al.*, (2013) observed [27]. It has got a 3rd preference, maybe because it is still a new product. A close look at Table 5 shows in 'Less than 10 percent' of ADI category, household investors' 1st preference

collectively went to SGBs and GMS-Medium Term Bank Deposit, and this comes out quite logically as risk-neutral investors naturally concentrate only on returns and do not pay attention to risk. The medium-term has the virtue of having an average risk. This makes sense for risk-neutral investors as they are positioned between aggressive and conservative investors. Risk-seeker investors concentrate on risk only and do not pay any attention to return. Table 6 reflects that household investors in 'Less than 10 percent' ADI, gave 1st preference to GMS-Long Term Bank Deposits, and this finding sounds sensible because long term deposits have high uncertainties and other concomitant risk.

Table 5: ADI Spend-wise Sample Distribution of Risk-neutral Investors.

S. No.	Gold Monetization and other Gold-Backed Schemes	The proportion of Risk-neutral Investors		
		Percentage of ADI Spent		
		<10	10-20	20-30
1.	GMS-Short Term Bank Deposit	7.3	22.0	2.8
2.	GMS-Medium Term Bank Deposit	14.7	16.8	0.7
3.	GMS-Long Term Bank Deposit	14.5	15.4	2.3
4.	Sovereign Gold Bond Scheme	14.7	15.2	2.3
5.	Gold ETFs	11.0	19.1	2.1
6.	India Gold Coin/Bar Scheme	10.3	20.7	1.2

Table 6: ADI Spend-wise Sample Distribution of Risk-seeker Investors.

S. No.	Gold Monetization and other Gold-Backed Schemes	The proportion of Risk-seeker Investors		
		Percentage of ADI Spent		
		<10	10-20	20-30
1.	GMS-Short Term Bank Deposit	2.1	6.9	3.2
2.	GMS-Medium Term Bank Deposit	3.0	8.5	0.7
3.	GMS-Long Term Bank Deposit	7.8	4.0	0.4
4.	Sovereign Gold Bond Scheme	6.3	3.5	2.4
5.	Gold ETFs	3.3	8.5	0.4
6.	India Gold Coin/Bar Scheme	6.9	5.0	0.3

However, in '10-20 percent' of ADI, 1st priority collectively went to GMS-Long Term Bank Deposits and gold ETF, but in '20-30 percent' category 1st preference went to GMS-Short Term Bank Deposits, and 2nd preference went to Sovereign Gold Bond Scheme. With less volume of investment and low involvement, a person can be little riskier than with high volume and high involvement investments like '20-30 percent' of ADI, which seems quite reasonable in the Indian scenario.

A critical look at Table 3 further reveals that in stark contrast to results of 'less than 10 percent' category, for both '10-20 percent' and '20-30 percent' of ADI, the 1st preference went to GMS with Short Term Bank Deposits rather than to GMS with Long Term Bank Deposits. For '10-20 percent' of ADI category, Gold Coin/Bar and gold ETF was the 2nd choice collectively and for '20-30 percent' of ADI the 2nd spot is tied between Gold Coin/Bar Scheme, gold ETF and Sovereign Gold Bond Scheme which is quite similar to 'less than 10 percent' category. Short term deposits in these higher spend categories, may be made by people just to familiarize, and understand the formalities involved so that once things are found to happen as expected, people go for long term investments.

B. Determinant Matrix for Gold Monetization Scheme (GMS)

Chi-Square Test has been used with a 5% level of significance to establish the possible associations. The association is checked for the type of locality (administrative area), sex, marital status, level of educational qualification, age categories, type of family structure, family size, number of males in the family, number of females in the family, number of earning members in the family, level of annual disposable income, stages of the life cycle, type of source of family income and investor's risk attitude. Null and alternate hypotheses for each of the above-mentioned socio-demographic variables were formulated and statistically checked with the help of SPSS Version 26. A typical null and alternate hypotheses looked as shown below.

H₀1- There is no significant relationship between a socio-demographic variable (locality, for example) and level of investment in the Gold Monetization Scheme.

H₁1- There is a significant relationship between a socio-demographic variable (locality, for example) and the level of investment in the Gold Monetization Scheme.

Likewise, all other hypotheses were formulated and tested for all socio-demographic variables. These hypotheses were tested with the help of Chi-square tests, and the results are presented in Table 7.

Table 7: Association of Socio-demographic Variables and Investment in GMS.

S. No.	Socio-demographic Variables	Chi-square Test (5 % level of Significance)			
		Value	df	p	Result
1.	Locality	23.033	9	0.006	Accepted
2.	Sex	22.826	3	0.000	Accepted
3.	Marital Status	5.449	3	0.142	Rejected
4.	Educational Qualifications	167.269	9	0.000	Accepted
5.	Age (years)	34.679	12	0.000	Accepted
6.	Family Structure	40.127	6	0.000	Accepted
7.	Family Size (No.)	34.825	6	0.142	Accepted
8.	Males in the Family (No.)	121.129	24	0.000	Accepted
9.	Females in the Family (No.)	132.643	27	0.000	Accepted
10.	Earning Members (No.)	89.974	18	0.000	Accepted
11.	Family's Annual Disposable Income (INR Hundred Thousand)	89.008	15	0.000	Accepted
12.	Stage of Life Cycle	66.477	24	0.000	Accepted
13.	Government Sector Job	96.543	3	0.001	Accepted
14.	Private Sector Job	4.210	3	0.240	Rejected
15.	Farming (Mainly Agriculture)	10.559	3	0.014	Accepted
16.	Farming (Mainly Horticulture)	40.749	3	0.000	Accepted
17.	Own Business	9.883	3	0.000	Accepted
18.	Daily Wage	5.544	3	0.000	Rejected
19.	Investor's Risk Attitude	29.493	6	0.000	Accepted

Chi-Square Test as reflected from Table 7 establishes that household investment in Gold Monetization (Y) Schemes has significant associations with type of administrative area (X₁), sex (X₂), level of Educational Qualification (X₃), Age (X₄) categories, type of family structure (X₅), family size (X₆), number of males in the family (X₇), number of females in the family (X₈), number of earning members in the family (X₉), level of annual disposable income (X₁₀), stages of the life cycle (X₁₁),

Government Sector Job (X₁₂), Farming (mainly Agriculture) (X₁₃), Farming (mainly Horticulture) (X₁₄), Own Business (X₁₅) as a source of income and investor's risk Attitude (X₁₆). However, the association with Marital Status, Private Sector Job, and Daily Wage as a source of income is not significant. This set of significant socio-demographic variables represent the independent Determinant Matrix to ascertain the making

of a decision towards household investment in Gold Monetization Schemes.

If we represent Household Investment in GMS, the dependent variable by Y and all independent variables by X_i (for $i = 1, 2, 3, \dots, 19$) as shown above, then

$$Y = f(X_i)_{\text{for } i = 1, 2, 3, \dots, 19} + \text{Error Term}$$

Where X_i (for $i = 1, 2, 3, \dots, 19$) is the determinant matrix of socio-demographic variables.

C. People's Sentiments and Suggestions about GMS

Apart from doing household preferences and ascertaining the variable matrix responsible for these preferences, the research further went ahead to see the perception of people about the level of willingness to accept various alternatives at the time of maturity of the gold monetization scheme.

Table 8 indicates that almost half of the respondents are the ones who would like to avail Gold Monetization Schemes by depositing anything between 26 to 50 percent of their gold holdings. About a quarter of the respondents are interested in taking cash with

appreciation instead of the gold form (jewelry, etc.) initially deposited. However, about 30 percent of respondents liked branded Indian gold coins at the time of maturity. It can be inferred here that respondents from Himachal Pradesh still have high affinity with gold. Nevertheless, there is a silver lining, that at least the form of gold got changed to coins, which are a standard product in terms of its purity, shape, design, and weight, from ornamental gold or jewelry. So, it is a useful gambit as people are showing goodwill to accept something else than gold jewelry. This certainly augers well for gold monetization scheme and other gold-backed schemes which had been launched by the government of India.

Suggestions to improve the customer base of the gold monetization scheme in Himachal Pradesh were collected through open-ended questions. The suggestions thus gathered were classified by using the indicator word/phrase approach. The following classes were finally created.

Table 8: Objects of Settlement at Maturity V/s Willingness to Avail GMS.

Objects of Settlement at Maturity	Not Willing	The proportion of Respondents Willing to Avail Gold Monetization Schemes (Percentage)				
		25 or Less	26 - 50	51 - 75	76 - 100	Total
Not Willing	9.0	0.0	0.0	0.0	0.0	9.0
Cash with appreciation	0.0	7.4	10.3	5.0	0.1	22.8
Branded Indian gold coin	0.0	8.6	17.6	4.7	0.0	31.0
Standardized bank coin	0.0	4.9	6.7	0.9	0.0	12.6
Same as deposited	0.0	3.7	11.6	0.2	0.1	15.6
Anything as it does not matter	0.0	4.5	3.6	0.7	0.2	9.0
Total (Percentage)	9.0	29.2	49.7	11.6	0.4	100.0

Table 9: Suggestions to Enhance the Use of Gold Monetization Schemes.

S. No.	Suggestions for Improvement in Gold Monetization Schemes	Group	Percent
1.	Banks and other bodies should explain that interest is on the amount of gold and not on the value of gold	SG1	2.6
2.	Banks must also be given additional incentives to boost gold monetization schemes	SG2	4.5
3.	Banks should do awareness campaigns to develop relation and trust with customers because people fear that banks may leak the information and it may reach in wrong hands	SG3	2.4
4.	Banks themselves should become authorized Collection and Purity Centers	SG4	3.2
5.	Cash Reserves held by the banks may be allowed in terms of gold	SG5	3.3
6.	Customers should have the option of taking back gold and or cash	SG6	4.3
7.	Explain to people about saving of tax on capital gains and income	SG7	4.4
8.	Gold must be regulated by some government agency for uniformity of price	SG8	3.6
9.	Government authorities should not question about inherited gold	SG9	3.5
10.	The government should do awareness campaigns	SG10	9.6
11.	The government should issue certificates for contributing to economic growth	SG11	4.7
12.	Jewelers should be encouraged to use monetization schemes	SG12	3.3
13.	Melting costs borne by the customers are very high should be reduced	SG13	3.3
14.	People fear that government may disturb them for wealth tax Government should allay such fears	SG14	3.0
15.	People must be told about overall return	SG15	4.9
16.	People think interest rates are less than the rates even on the savings accounts	SG16	3.7
17.	Premature withdrawal should be allowed without any penalty	SG17	4.4
18.	Religious bodies other than temples and social, charitable trusts should also be encouraged	SG18	2.6
19.	Same jewelry should be given back	SG19	5.2
20.	Spread awareness that people can earn interest in physical gold	SG20	4.1
21.	Tell people about the risk of keeping physical gold in the house	SG21	5.9
22.	Tell people that gold lying in bank lockers can also earn interest	SG22	3.1
23.	Temples must be encouraged to use gold monetization schemes by extra incentive	SG23	2.9
24.	The documentation work for temples should be minimized	SG24	3.2
25.	Weighing and testing of gold should happen before the investors	SG25	3.8
Total			100.0

Various suggestions given by the respondents have been classified into twenty five suggestion groups (SG) as clearly visible from Table 9. It can be easily substantiated from the same table that a majority (about 10 percent) of respondents unanimously recommended that 'Government should do awareness campaigns (SG10) to popularize Gold Monetization Schemes among people of the state. The 2nd highest category of respondents (about 6 percent) suggested, 'Tell people about the risk of keeping physical gold in the house (SG21)'. This sounds good as people are very much aware that gold lying in the house apart from carrying a risk of being stolen also is an unproductive asset (does not earn by itself). Another essential suggestion that came is, 'People must be told about the overall return.' What it means is that people do not know that in GMS, interest is given on the volume (weight) of the gold rather than on the value of the gold, as was the case with erstwhile Gold Deposit Schemes (GDS). All of these are pictorially represented in Fig 1. Some of these suggestions align with the findings presented by Singh *et al.*, (2017) [19].

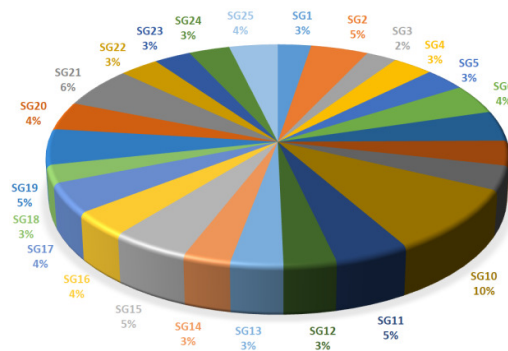


Fig. 1. Percentage Distribution of Suggestions to Improve the Use of GMS.

V. LIMITATIONS OF THE STUDY AND SCOPE FOR FUTURE RESEARCH

The study assumed rationality and equality of information on the part of respondents. Further, it is believed that every family has only one decision-maker, and he/she disclosed the truth. People were reluctant to disclose the information about their income, sources of income, and gold and other jewelry possessed by them. Owing to the lack of time, the study concentrated only on households, and religious institutions could not be covered. Gold Monetization Scheme, Gold ETF, and Sovereign Gold Bond, etc., are still new products, and Indians who show much of affinity towards gold will take substantial time before gold ETF can replace gold jewelry and gold bullion for investment. Awareness about the schemes and financial literacy are the critical ingredients for success. They need to be promoted at a mass scale. Maybe a small chapter about the effects of gold jewelry gets added at the school level curriculum. Graduates need to be told and trained on ways they can help themselves and the nation grow. That is how they will feel an internal urge to make an economically sound decision.

There is considerable scope for further research to ascertain the performance of such schemes. A parallel with overseas learning can be researched and suggested. Perhaps, researching better ways to make gold ETF and Sovereign Gold Bonds popular in India, would be the need of the hour. Steadfast affinity and strong sentiments attached to gold jewelry are not

letting people utilize GMS as they do not get the same jewelry back. The researcher feels that many households might prefer monetization schemes, which allow investors to get back similar jewelry if not the same. There is a possibility where Gol collaborates with an organized gold company like Tanishq to give an option to investors of GMS to get a piece of similar jewelry made by Tanishq instead of cash or other forms of gold.

VI. CONCLUSION

Among the households, those who had spent low volumes of ADI, gave 1st preference to the Long-Term Bank Deposits of Gold Monetization Scheme and gave 2nd priority to Sovereign Gold Bond Scheme. For the household in the same category of annual disposable income, Gold ETF and India Gold Coin/Bar Schemes got tied up at 4th place of preferences, and GMS-Short Term Deposits was the least preferred choice. Long-term schemes with more extended lock-in periods have more uncertainty and hence involve more significant risk in them. Early adopters, the investors those who take early but a calculated risk, usually classified as risk-seekers, invest in long term deposits, and Sovereign Gold Bonds.

In the higher volume categories of '10-20 percent' and of '20-30 percent' of ADI both, households preferred GMS-Short Term Bank Deposits the most. 2nd preference went to gold ETF, and SGBs got the 3rd priority. Both Gold ETFs and SGBs provide safe and stable returns. Therefore most of the risk-averse investors choose them. Families with a higher number of males preferred GMS-long term deposits as they keep long term future perspectives in mind. Ladies straight away preferred SGBs, which is one of the safest Gold-Backed alternatives. A good majority of investors were graduates, and they preferred SGBs over others. Families with a size of five preferred medium-term schemes. Average sized families preferred medium term schemes because it represents a moderate risk. Gold ETF did not show very encouraging results; maybe people are not ready for transacting through the stock exchange, or they just want to invest and forget with no hassles with a broker, etc.

Families with three earning members preferred GMS with long term perspective as their 1st choice and SGBs as the close 2nd choice. The same was the case with families with moderate ADI of INR 6.1 to 8 Hundred Thousand. Families with Agriculture and Horticulture as the income sources tend to receive stable and regular returns with long term security and thus chose GMS with long term deposits, Indian Gold Coin/Bar Scheme, and Sovereign Gold Bonds. Gold ETF was not a preferred choice here as well, but it was still better than the GMS with Short Term Deposits. This may be because the interest rates offered on Short Term Bank Deposits vary from bank to bank, and investors do not feel sufficiently confident of the best deal.

Further investment in Gold Monetization Scheme showed significant associations with type of locality (administrative area), sex, level of educational qualification, age categories, type of family structure, family size, number of males in the family, number of females in the family, number of earning members in the family, level of annual disposable income, stage of the life cycle, government sector job, farming (mainly agriculture), farming (mainly horticulture), own business as a source of income and investor's risk Attitude. However, association with marital status, private-sector

job, and daily wage as a source of income are not significant. The set of above significant socio-demographic variables represents the independent Determinant Matrix used for decision making towards household investment in Gold Monetization Schemes.

It is also concluded that almost half of the respondents would like to deposit up to 50 percent of their gold holdings for GMS. About 25 percent of the respondents are interested in taking cash with appreciation instead of the gold form deposited initially. Respondents recommended that for an all-round success of gold-backed schemes in the state of Himachal Pradesh, the government should do awareness campaigns on a large scale as awareness is low. Apart from this, financial literacy needs to reach every individual in the benefit of the nation.

Christopher Lovelock, a pioneer in the field of Services Marketing as an author, professor, and consultant in the world, once said that "The only person who likes the change in the world is a wet baby." It means there is always resistance against any change, and it gets all the more pronounced when the change is about human behavior. Gold Monetization and other Gold Backed Schemes like Gold ETFs, Sovereign Gold Bond Scheme, or Indian Gold Coin/Bar Scheme will take some gestation period before they give excellent results. However, as of now, it is so far, so good.

VII. ACKNOWLEDGMENT

The authors would like to acknowledge the services of Mr. Neeraj Pizar, Assistant Director- Scientific Writing Cell, Shoolini University, Solan-173212 Himachal Pradesh, India.

Conflict of Interest. It is confirmed that no one of the three authors has any conflict of interest associated with the publication of this paper.

REFERENCES

- [1]. Government of India. (2016). Gold Monetization Scheme: Deposits by Temple/Religious Bodies. <http://pib.nic.in/newsite/mbErel.aspx?relid=14504>, Press Information Bureau.
- [2]. Top 15 importes in the world. (2019). <http://www.worldstopexports.com/coal-imports-by-country>, as accessed at 4.35 pm IST
- [3]. NITI Aayog Report. (2018). Government of India press release. <http://pib.nic.in/newsite/PrintRelease.aspx?relid=169103>.
- [4]. WGC. (2019). India's Gold Market. 2-5.
- [5]. Fergal, A. O., Brian, M. L., Jonathan, A. B., & Dirk, G. B. (2015). The Financial Economics of Gold- A Survey. *International Review of Financial Analysis*, 41, 186-205.
- [6]. D'Souza, E. Gold Monetization Scheme for India (2015). *Economic & Political Weekly*, 1(12): 23-27.
- [7]. Reserve Bank of India (2013). Report of the Working Group to Study the Issues Related to Gold Imports and Gold Loans NBFCs in India. (Chairman: KUB Rao), RBI, Mumbai.
- [8]. WGC. (2017) Annual Review.
- [9]. Government of India. Union Budget 2015-16 speech. 2015. <http://indiabudget.nic.in/budget2015-2016/ub2015-16/bs/bs.pdf>
- [10]. Government of India (RBI, 2015a). (November 2015). Gold Monetization Scheme. <http://finmin.nic.in/swarnabharat/gold-monetisation.html>. Ministry of Finance.

- [11]. SEBI/IMD/CIR No.4/58422/06, January 24, 2006. https://www.sebi.gov.in/sebi_data/commondocs/cirimd0406_h.html, accessed on 23 March 2017.
- [12]. Government of India (RBI, 2015b). (November 2015). Sovereign Gold Bond. <http://finmin.nic.in/swarnabharat/sovereign-gold-bond.html>. Ministry of Finance.
- [13]. Government of India (RBI, 2015c). (November 2015). Indian Gold Coin. <http://finmin.nic.in/swarnabharat/indian-gold-coin.html>. Ministry of Finance.
- [14]. Narayanan, P., Gopalakrishnan, B., & Sahay, A. (2017). Gold Monetization in India as a Transformative Policy: A Mixed-Method Analysis, W. P. No. 2017-01-02. *Research and Publications, Indian Institute of Management Ahmedabad, India*, 1-73.
- [15]. Tsetsos, K., Chater, N., & Usher, M. (2015). Examining the mechanisms underlying contextual preference reversal: Comment on Trueblood, Brown, and Heathcote (2014). *Psychological Review*, 122(4), 838-847.
- [16]. Kaur, P., & Virani, S. (2017). Gold Monetization Scheme - Old Wine in New Bottle. SIMSR International Finance Conference, SIFICO 2017, *IOSR Journal of Economics and Finance (IOSR-JEF)*, 42-48.
- [17]. Deepak, R. (2016). Gold Monetization in India: A Paradigm Shift in Regulation, IES Management College and Research Centre (IESMCR). *IOSR Journal of Business and Management (IOSR-JBM)*, 88-91.
- [18]. www.economicstimes.indiatimes.com. (2015). Gold Monetization Scheme can bring Idle gold to industry use, as accessed on 30 June 2017, 3:25 pm IST.
- [19]. Singh, C., Das, A., Kansal, C., Kamath, P., & Rajan, R. (2017). How to Make the Gold Monetization Scheme Successful? *Working Paper, No: 534, Indian Institute of Management Bangalore-WP 534*, 1-28.
- [20]. Raghavan, S. A., & Ahmed, Nisar, N. (2011). Passion for Ornamental Gold jewelry in India. *International Journal of Enterprise Innovation Management Studies (IJEIMS)*, 2, 125-135.
- [21]. FICCI-WGC. (December 2014). Why India Needs a Gold Policy. 10-59.
- [22]. Thies, C. F. (2005). Gold Bonds and Silver Agitation. *The Quarterly Journal of Australian Economics*, 67-86.
- [23]. Avabruth, M., Srikanth, M., & Saravanan, P. (2015). Gold Monetization Scheme. *Economic and Political Weekly*, 1-6
- [24]. Chaudhary Kajal & S. S. (2017). A Comparative Study of Indian Gold Schemes with Special Reference to GDS and GMS in Indian Context. *International Journal of Innovative Studies in Sociology and Humanities*, 35-49.
- [25]. Kundu Tadit. (20 Nov 2019). <https://www.livemint.com/> as accessed at 2:57 pm IST.
- [26]. Verma, N., Negi, Y. S., & Shukla, R. K. (2020). Household Investment Preferences for Gold and Gold Exchange Traded Funds (ETFs) in Himachal Pradesh, India. *International Journal on Emerging Technologies*, 11(2), 322-331.
- [27]. Chaudhary, C. R., & Bakhshi, P. (2016). The Critical Review of Gold Monetisation Scheme and Sovereign Gold Bond Scheme. *Journal of Applied Management-Jidnyasa*, 8(1), 18-27.
- [28]. Nawas, M. N., & Sudindra, V. R. (2013). A study on various forms of gold investment. *Asia Pacific Journal of Research*, 2(4), 1-16.
- [29]. Sudindra, V. R., & Naidu, J. G. (2019). Is Sovereign Gold Bond Better Than Other Gold Investment? *International Journal of Management Studies*, 6(2), 101-104.
- [30]. WGC. (2020). World Gold Outlook Report.1-8.
- [31]. Siddiqui, K. (2013). Heuristics for Sample Size Determination in Multivariate Statistical Techniques. *World Applied Sciences Journal*, 27(2), 285-287.

How to cite this article: Verma, N., Negi, Y. S. and Shukla, R. K. (2020). Determinant Matrix for Gold Monetization Scheme (GMS) and Household Preferences for Gold-Backed Products in Himachal Pradesh, India. *International Journal on Emerging Technologies*, 11(3): 33-42.