



Monetary and Banking Research Academy

Affiliated to the Central Bank of Iran

Project LINK Spring Meeting

Mexico City, May 2005

Country Report: Iran

(Based on Macroeconometric Model of Iran Ver. 6.1)

Bijan Bidabad

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1. Recent Trends

In a major step to reform the economy, Iran's 3rd development plan (2000-2004) is aimed for structural reforms in Iran's economy. Partial privatization of financial markets, balanced government budget, establishment of foreign exchange reserve fund/account (to stabilize the economy from oil price fluctuations), unification of exchange rate, and movement from fixed to managed float exchange rate system, revision of direct tax law to lower tax rates and indirect levies integration scheme, revising foreign investment protection and inducement law, abolition of export surrender requirement (deposit), removal of some non-tariff foreign trade barriers and changing the government budget book keeping to GFS² standards, strengthening the capital market (stock exchange), expansion of financial sector, and taking some steps in privatization of government's companies are the main reforms of the 3rd development plan. However, the economy is in a more stable position and in a better position for economic growth with the help of the higher oil revenues.

Accordingly, the average rate of GDP growth for the period of 2000-2003 was equal to 5.5%. The average inflation rate was 13.8% which is nearly half of the second development plan average. The following tables show the main macroeconomic variables after the revolution period.

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² Government Financial Statistics developed by International Monetary Fund.

Main economic variables during after the revolution period

%		1st plan		2nd plan	3rd plan		4th plan
Gregorian Calendar	1979-1988	1989-1993	1994	1995-1999	2000-2003	2004	2005-2009
Hijri Shamsi Calendar	1358-1367	1368-1372	1373	1374-1378	1379-1382	1383	1384-1388
Inflation rate	18.9	18.4	35.2	25.1	15.9	16.4	9.9
Economic growth rate	-1.9	7.4	0.5	3.2	5.5		8
Investment growth rate	-6.5	9.2	-14.2	8	11		12.2
Liquidity (M2) growth rate	23.1	23.6	35.8	44.6	28.6	28.7	20
Dollar/Rial % changes	29	12.1	58.6	24.6	-0.8	-5	

Source: A quart of century ups and downs, review of Iran's economic changes, Ministry of Finance and Economic Affairs. 2004, Tehran, Iran.

Economic trends, Central Bank of Iran, No. 36, <http://www.cbi.ir/publications/PDF/etno38.pdf>

Hijri Shamsi calendar starts at 21st March. 21 March 2004 Gregorian is 1st day of 1383 Hijri Shamsi.

4th plan items are approved figures from the law of 4th development plan.

Main economic variables during the after revolution period

Billion Dollars		1st plan		2nd plan	3rd plan		4th plan
Gregorian Calendar	1979-1988	1989-1993	1994	1995-1999	2000-2003	2004	2005-2009
Hijri Shamsi Calendar	1358-1367	1368-1372	1373	1374-1378	1379-1382	1383	1384-1388
Oil export	14.6	15.5	14.6	15.4	22.6	36	24
Non-oil export	0.6	2.3	4.8	3.1	4.5	7.5	10.5
Import	11.7	22.2	11.8	13.7	20.1	36	37

Source: A quart of century ups and downs, review of Iran's economic changes, Ministry of Finance and Economic Affairs. 2004, Tehran, Iran. And Central Bank of Iran.

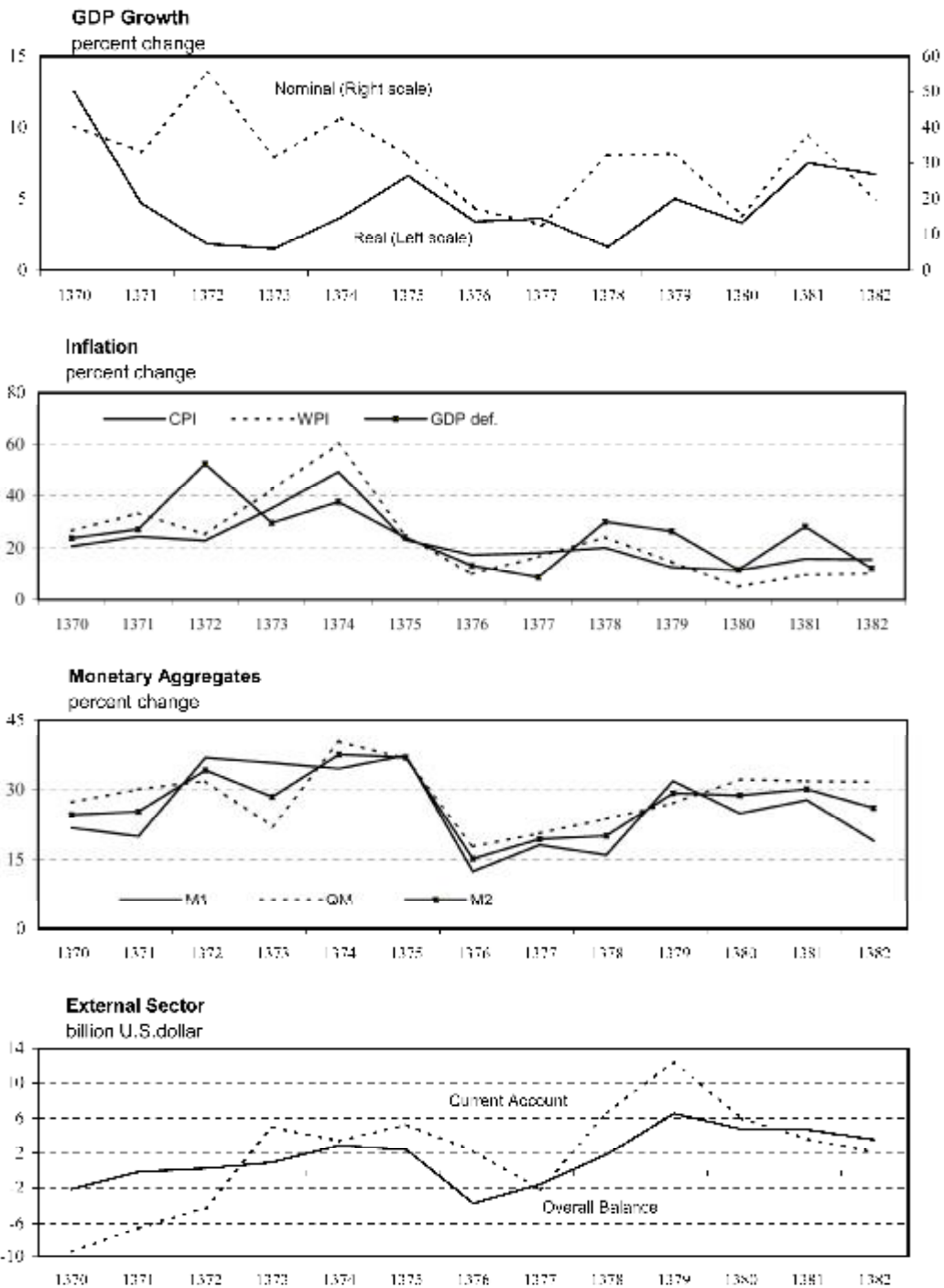
Economic trends, Central Bank of Iran, No. 36, <http://www.cbi.ir/publications/PDF/etno38.pdf>

Hijri Shamsi calendar starts at 21st March. 21 March 2004 Gregorian is 1st day of 1383 Hijri Shamsi.

4th plan items are approved figures from the law of 4th development plan.

The 4th development plan in merit is similar to the 3rd plan as well. The general approach of the 4th plan is more or less similar to the 3rd plan and it is not expected for great change in the economy from the plan sight of view. But two points are worth mentioning that are the upcoming presidential election and continuous oil price increase which may alter the whole approach to the development process of Iran.

Major Economic Trends

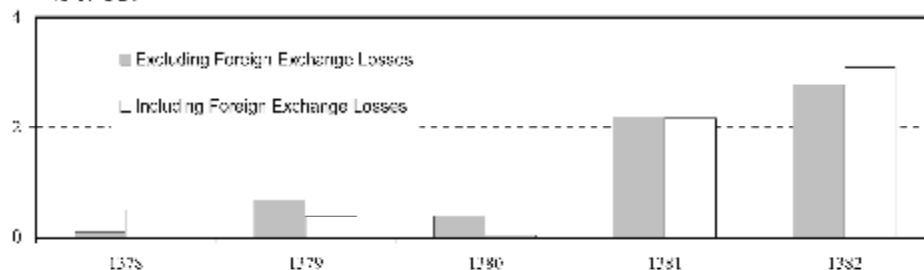


Source: Economic trends, Central Bank of Iran, No. 36, <http://www.cbi.ir/publications/PDF/etno38.pdf>

Major Economic Trends

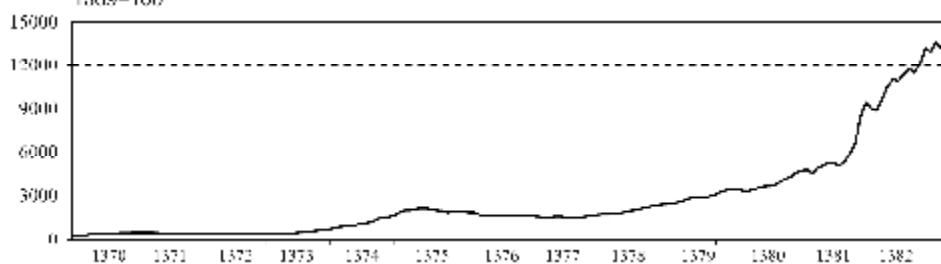
Government Budget Deficit

% of GDP



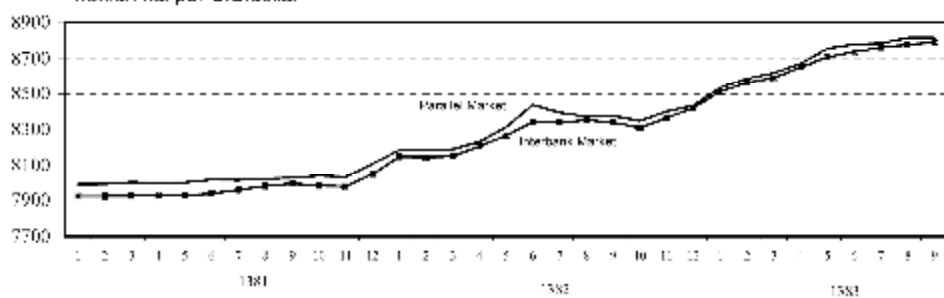
Share Price Index

1369=100



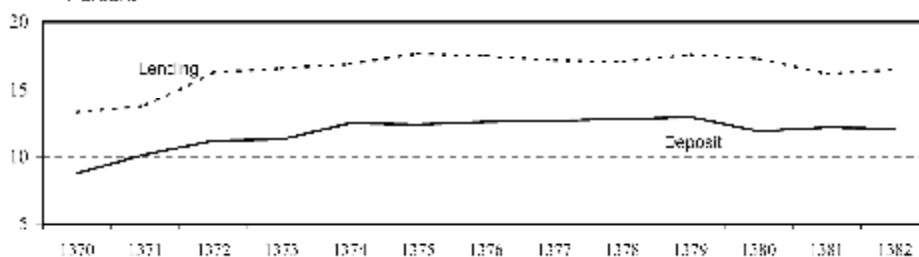
Exchange Rate

Iranian rial per U.S.dollar



Banks' Average Deposit & Lending Rates

Percent



Source: Economic trends, Central Bank of Iran, No. 36, <http://www.cbi.ir/publications/PDF/etno38.pdf>

2. National policy assumptions

Foreign exchange system

The currency of Iran is Iranian Rial. Prior to March 21, 2002, the exchange rate system consisted of two official rates, the "oil-notional rate" used for government budget and some external transactions. The "non-oil export" or "certificate of exchange deposit" rate was effectively equivalent to market exchange rate at Tehran Stock Exchange (TSE rate) and applied to non-oil export receipts and regular import transactions.

From the beginning of Iranian fiscal year March 21, 2002, a unified managed float foreign exchange system was adopted. Exchange rates unification was launched along with elimination of all exchange restrictions on current account transactions prior to March 2002. Therefore, all foreign exchange transactions that formerly took place in TSE were shifted to a newly established inter-bank market. The basic official rate (oil-notional rate) was eliminated, and the exchange rate was unified to the rate prevailing at TSE market before unification.

In the subsequent years, exchange rate is determined under a managed floating system. Thus, all foreign exchange regulations in the areas of transaction of goods, services, and banking operations were revised with the aim of complying with the new exchange regime. In this market, in addition to the central bank, other banks can buy and sell foreign currencies. Thus, exporters are availed with full option in managing their foreign exchange resources. But there are some restrictions on foreign exchange capital account.

It is assumed that this system will go on during the forecast period.

Trade reforms

According to imports and exports regulations, imports are classified as "authorized", "conditional" and "prohibited" goods. Import of "authorized" goods requires no special license and permission, while import of "conditional" goods requires licensing by respective authorities. "Prohibited" goods are those which are forbidden by laws. As a whole, elimination of certification issuance procedures for almost all import items in conditional category was made more liberalization in foreign trade system.

To remove barriers to trade and restricting the smuggling, Ministry of Commerce announced a list of permitted intermediate goods and capital goods which are importable without foreign exchange transfer. To maintain coordination between foreign exchange and trade policies, the Ministry of Commerce revised the regulations pertaining on duties and tariffs. In this regard, downward adjustments were put into effect by a ratio of 5/22 as of March 21, 2002 and all import duties, taxes, and other charges (except commercial profit tax) were unified for the March 21, 2003 and a 4 percent duty rate was levied as a base for custom duties. New conditions

were also set for using short-term credit lines (refinance) for importers. Thus, the import of spare parts and manufacturing machinery by private sector are authorized through this channel.

To promote non-oil exports, the Export Promotion Fund was established. To further liberalize the non-oil exports, export of all goods and services were exempted from surrender requirement (deposit) from March 21, 2002. This was a very important improvement in Iran's non-oil export. To compensate incurred losses of exporters due to exchange rate fluctuations, such as drastic fall of world prices of exported goods, some protections were defined through Export Guarantee Fund. Accompanying with these arrangements, Ministry of Commerce announced a new export rewards payments since 2002. Accordingly, goods with 10 to 100 percent of their domestic value-added, receive a reward of 1 to 3 percent of export values. In addition, 1 to 3 percent of export value shall be rewarded for marketing and export of new commodities. In another development, the comprehensive export promotion program was approved. The main targets of this program revolves around market competitiveness, reduction in public sector ownership, granting of explicit subsidies, reduction of tariffs and extension of banking facilities to export sector.

It is expected that this will be going on during the forecast period.

Foreign investment

The "Law for Attraction and Protection of Foreign Investment" was revised in 2002. In the revised version, the maximum share of foreign investment in all economic sectors is set to 25 percent and in all activities to 35 percent. The oil sector is exempted from these limits.

It is expected that there will not be any major changes in Iran's foreign investment. That is, there is no expectation for capital account liberalization more than free zone areas.

Monetary policies

The Money and Credit Council (MCC) approved the following policies to be implemented in 2004:

1. Public banks are authorized to extend up to 45% increase in outstanding of non-public sector facilities (loans) in 2004 without limitation of sectoral credit allocations. The share of various sectors out of total increase in the outstanding facilities of non-public sectors for commercial banks are as follows:

Sectoral allocation of credit to non-public sector (percent)	
Agriculture and water	25
Manufacturing and mining	32
Housing and construction	28
Exports	11
Domestic trade, services and miscellaneous	4
<u>Total</u>	<u>100</u>

2. The provisional (expected) profit (interest) rate for short-term deposits was determined at 7 percent, and for term investment deposits was set at 13-17 percent per annum for deposits for different maturities. Banks are allowed to set their rates on two, three, and four-year deposits within the above range.
3. Expected (minimum) banking loans interest rates for manufacturing, mining and export sectors were reduced by one percent compared to 2003 rates. The rates for other sectors in public banks are the same as before. Thus, it is also assumed that the loans' interest rates of banking system will be reduced by 1% in 2004 and remain unchanged in 2005.
4. To reach the targets of the 3rd Plan regarding inflation rate controls, Central Bank of Iran targeted liquidity growth within the range of 20-24 percent.
5. Central Bank of Iran was authorized to issue 5 trillion Rials participation papers³ with 17% minimum expected profit (interest) rate.
6. Reserve requirement ratios for public commercial banks, private banks and non-bank credit institutions unified equal to weighted average of reserve requirement ratios at the end of 2003 for different financial institutions. Central Bank of Iran is authorized to change this rate in the range of $\pm 3\%$.

The above conditions are also adopted as policy assumptions for the forecast period.

Fiscal policy

According to the 2004 government budget law, the following guidelines are drawn:

1. Increase in outstanding of directed banking facilities in 2004, is to be up to 3 trillion Rials. Public sector share of this increase is 25% and of cooperative and private sectors 75%. At least 65% percent of the share of cooperative and private sectors shall be distributed among deprived provinces.

³ Participation paper is some kind of bond with guaranteed and determined minimum expected interest rate. This invention is used to finance investment projects and the final interest rate will be determined at maturity in some excess of minimum rate.

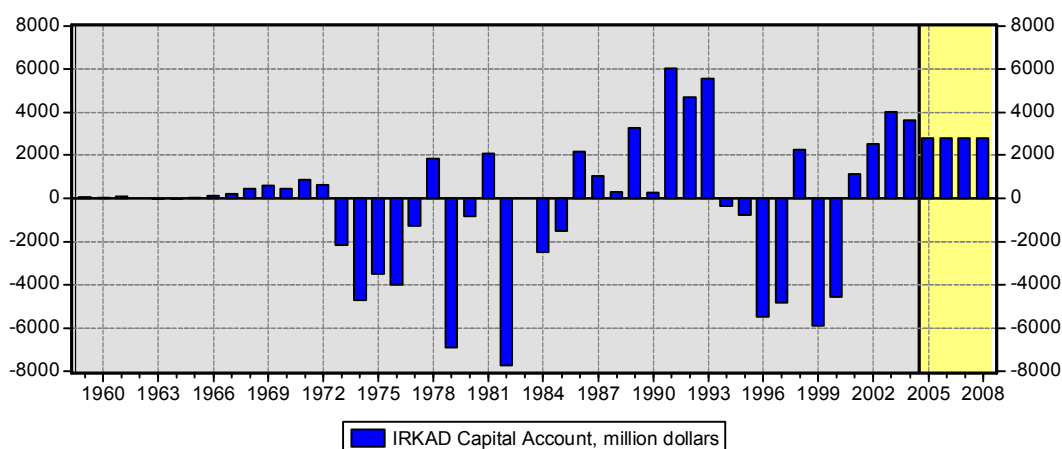
2. Government is allowed to sell up to the ceiling of 16.1 billion us dollars in 2004. Moreover, the Central Bank is responsible for regulating foreign exchange market and management of balance of payments.
3. The accounting rate of government foreign exchange sale is based on inter-bank market rate. Government is allowed to provide and guarantee financial resources up to 9.3 billion dollars from foreign capital markets in form of project finance contracts or partnership.
4. Government is allowed to issue 10 trillion Rials participation papers to accelerate the implementation of acquisition of non-financial assets. Of this amount, 2 trillion Rials is allocated to road and transportation sector, 2.5 trillion Rials to water resources and 5.5 trillion Rials to other projects. Public corporations are also allowed to rise up participation papers issuance to 3.2 trillion Rials through issuing participation papers for completing projects of acquisition of non-financial assets.
5. Government current and development expenditures are assumed to be according to approved amounts for 2004 and will grow by previous year growth rate in 2005.

It is also assumed that there will not be any important changes from the above picture of government budget structure in our forecast period.

According to above presumptions, the amounts of assumed exogenous variables are as follows.

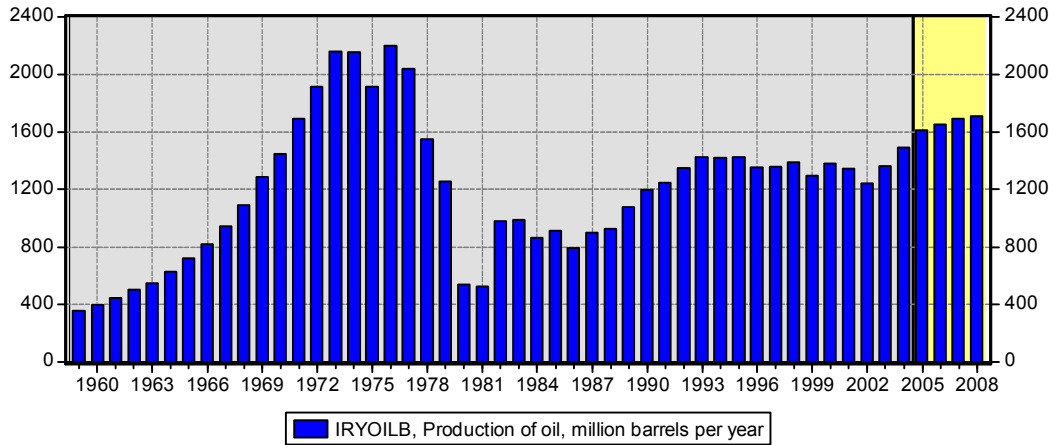
- Capital account

Historical capital account data of Iran is less reliable than other items in her balance of payments. For the 4 years period of 2005-2008, mean of 2001-2004 of this variable was adopted as forecast.



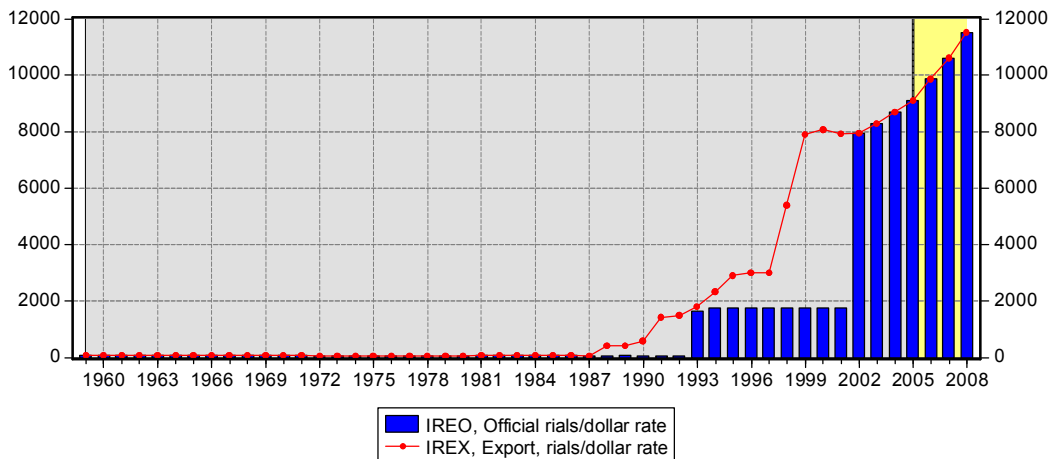
- Production of oil

Production of oil of Iran is predicted to be constant during the 4th plan (2005-2009), but production of gas condensate will be growing through South Pars investment in gas production.



- Exchange rates

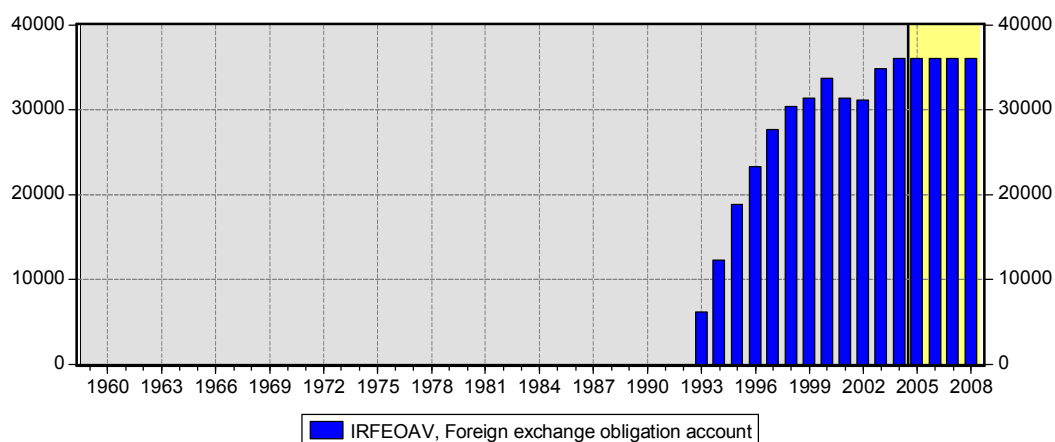
Official and export exchange rates for 2005 are unique, and are as government budget has estimated for this year. That is 4.5% increase to 2004. We assign this value plus 3.8% for Euro/dollar average appreciation we will get 8.3% average increase for rial depreciation against dollar for 2006 to 2008.



- Foreign exchange obligation account

This variable is predicted from Central Bank of Iran financial calculations.

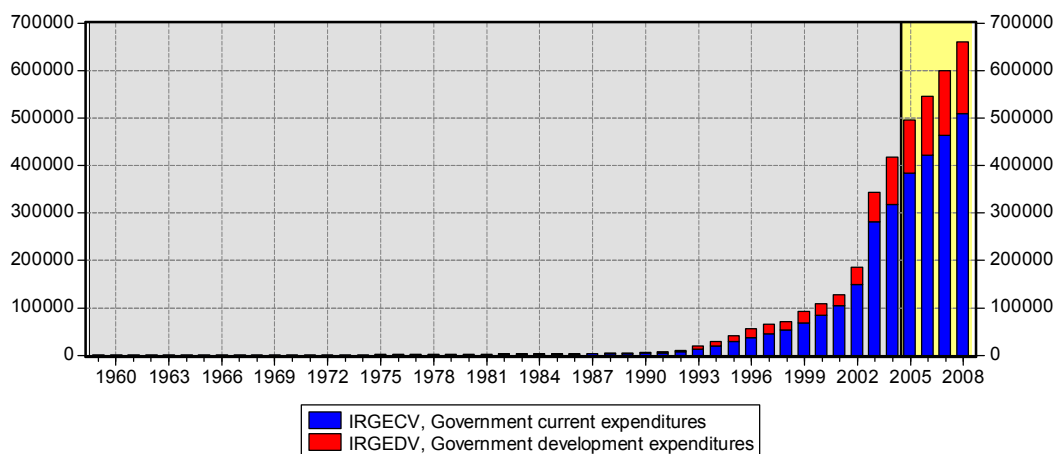
Billion rials



- Government expenditures

According to 2005 budget law, the estimates of current and development government expenditures are used. Forecast of these two items for 2006-2008 are based on the growth rates of these items in the law of 4th development plan.

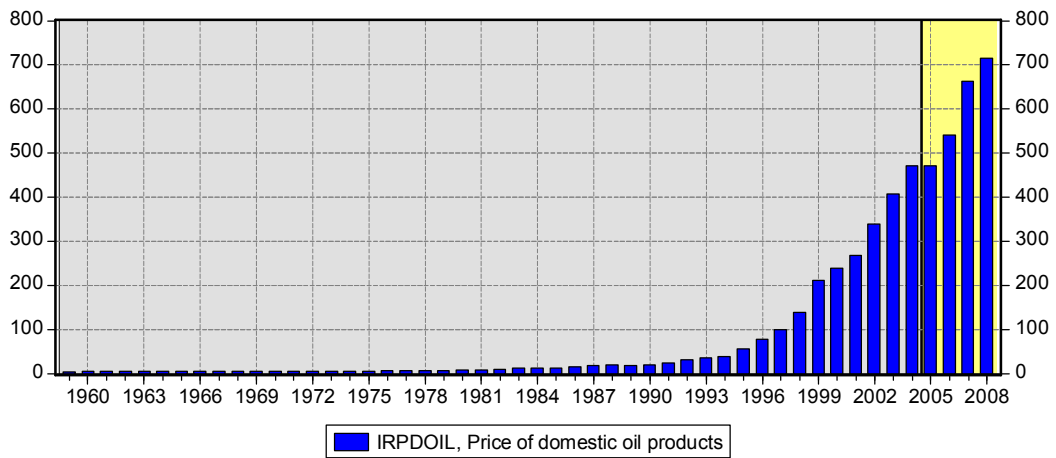
Billion rials



- Price of domestic oil products

According to government budget law for the year 2005 the prices of 9 items including energy and (domestic) oil products will not increase for the first half of the 1384 (till October 2005). For the years 2006-2008 we adopt a growth rate of 2004 to 2003.

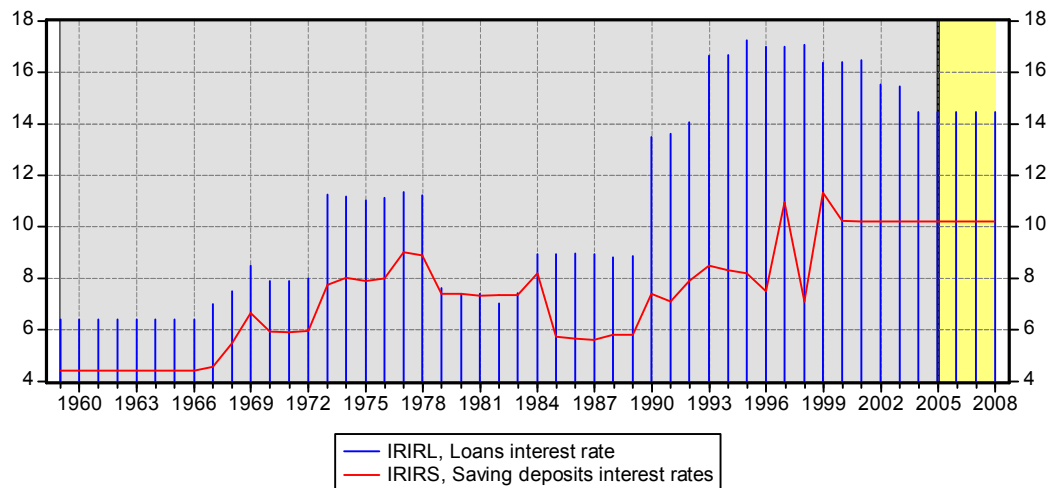
Index



- Banking Loans and saving deposits interest rates

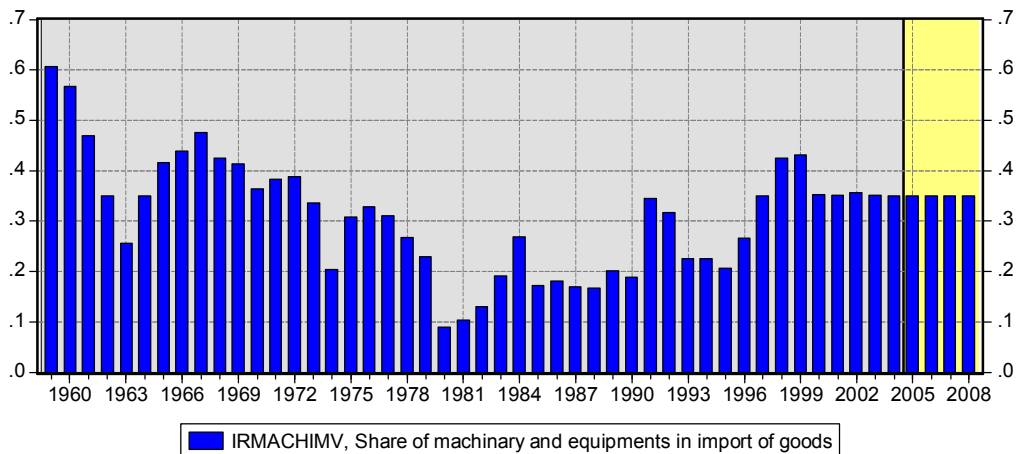
It is predicted that Central Bank of Iran will not reduce the loan and saving interest rates in 2005-2008 period. There was a 1% reduction in 2004 loans interest rates.

%



- Share of machinery and equipments in import of goods

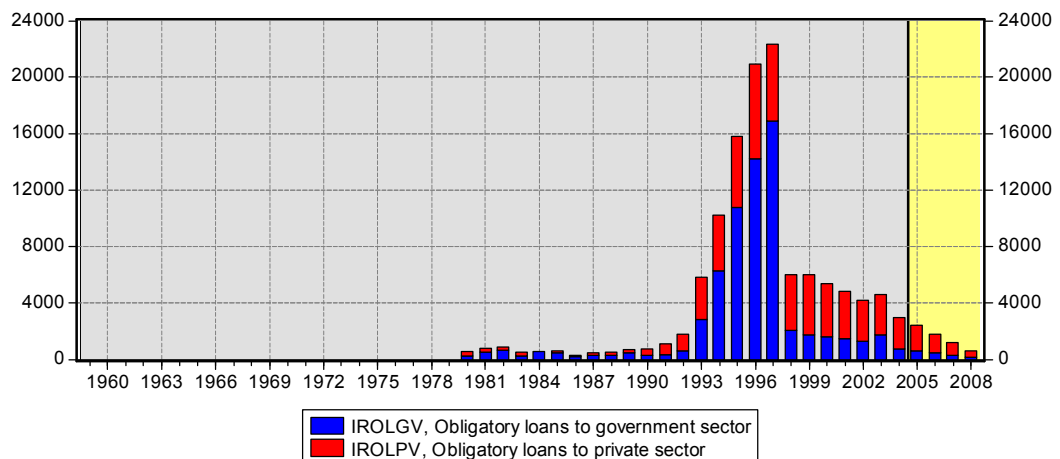
It is assumed that share of machinery and equipments in import of goods is the same as previous years for the period of 2005-2008.



- Obligatory loans issued by government annual budgets

According to annual government budget, the banking system is obliged to grant credit facilities to private and public sectors for exact purposes. According to the 4th development plan an annual decrease of %20 relative to 2004 should be occurred. The trend and forecast of these variables are as depicted by the following graph:

Billion rials

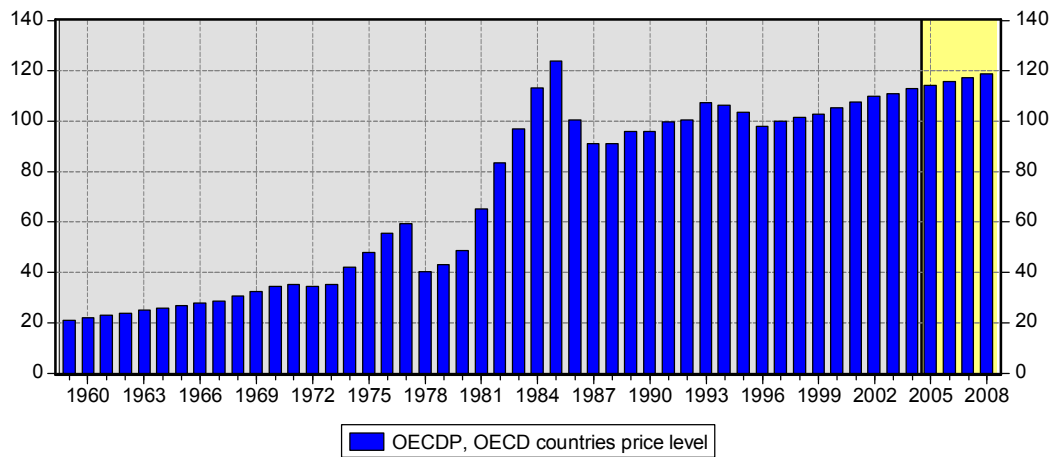


3. International environment

It is also assumed that the foreign economic variables of our model are as follows. However, the main variables affect Iran's economy is the crude oil price.

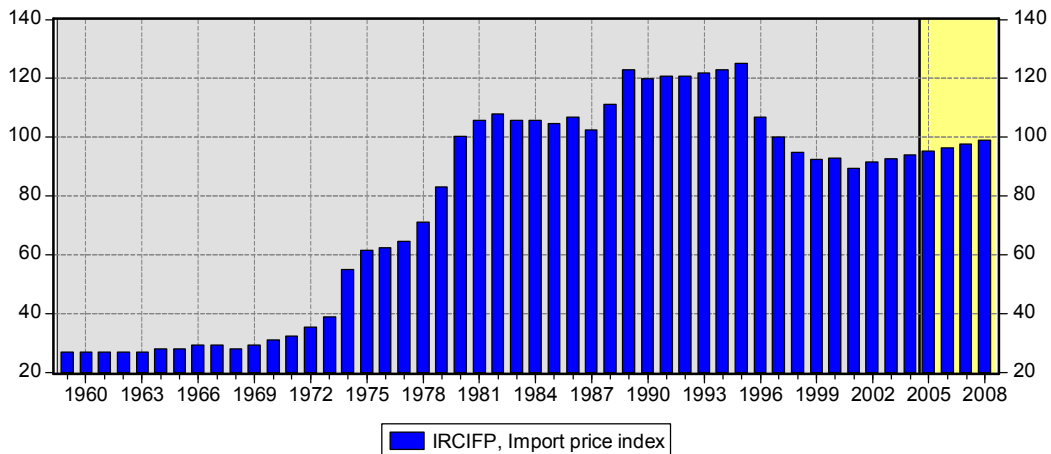
- OECD countries prices

The ex-post values for this variable and forecast values are depicted by the following graph. The values for 2003-2005 are based on Summary of Project LINK World Economic Outlook for Germany; since this country is important commercial partner of Iran. 2006-2008 values are based on 2003-2005 inflation rates average.



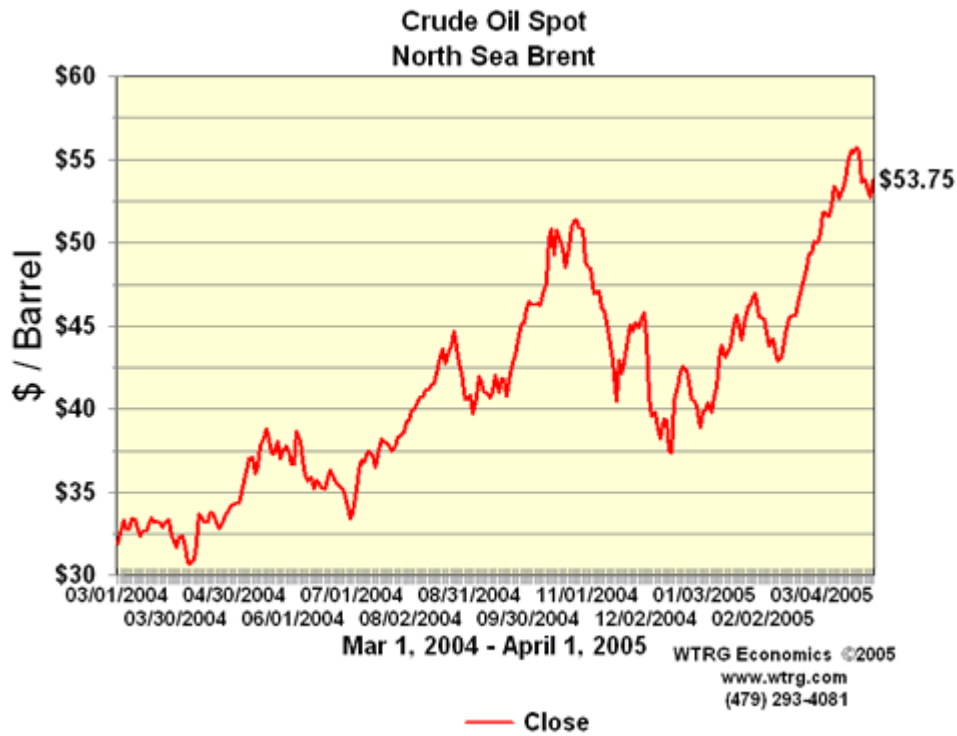
- Import price index

This variable has been predicted according to OECD price variable (OECDP).



- Price of oil

Oil prices have been rising and different forecasts do not predict low oil prices. What are the chances for prices to return to \$30 per barrel and what are the risks for even higher prices? This lost answer will be the most important variable in the Iran's economy. As the following graph shows, the oil price has an increasing pattern. But as a national model builder, we can not forecast the future of this variable in our national framework and any assumption regarding crude oil price may highly affect the forecasts of Iran's economy. However, we assumed that increase in price of oils in 2005 will coincide with LINK Global Economic Outlook. That is the average international price of oil is assumed to be \$38 per barrel of Brent crude oil in 2005 compared with an estimated average of \$40 in 2004.



The forecasts for 2006-2008 are calculated from the growth rates of world oil prices by International Energy Outlook 2004 based on the following –high oil price– graph⁴:

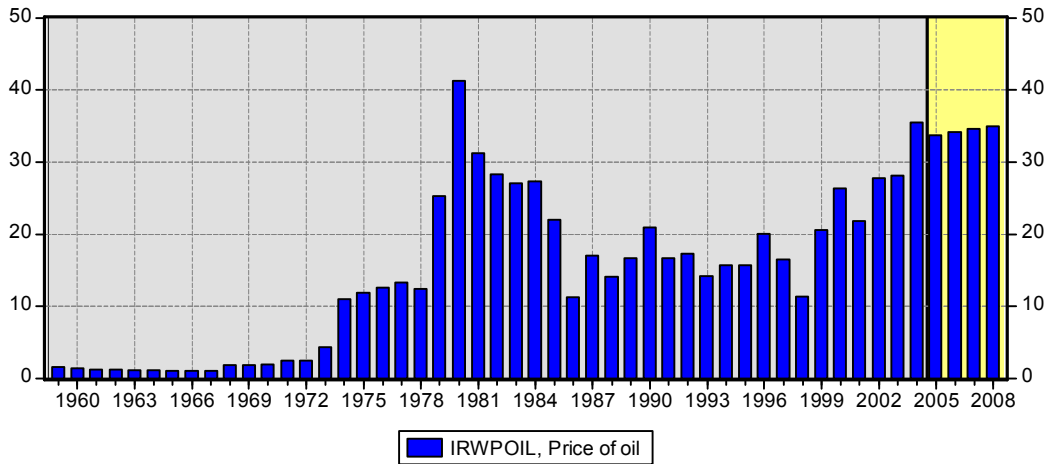
Figure 26. World Oil Prices in Three Cases, 1970-2025



⁴ <http://www.eia.doe.gov/oiaf/ieo/oil.html>

Data are from the file: http://www.eia.doe.gov/oiaf/ieo/excel/figure_26data.xls

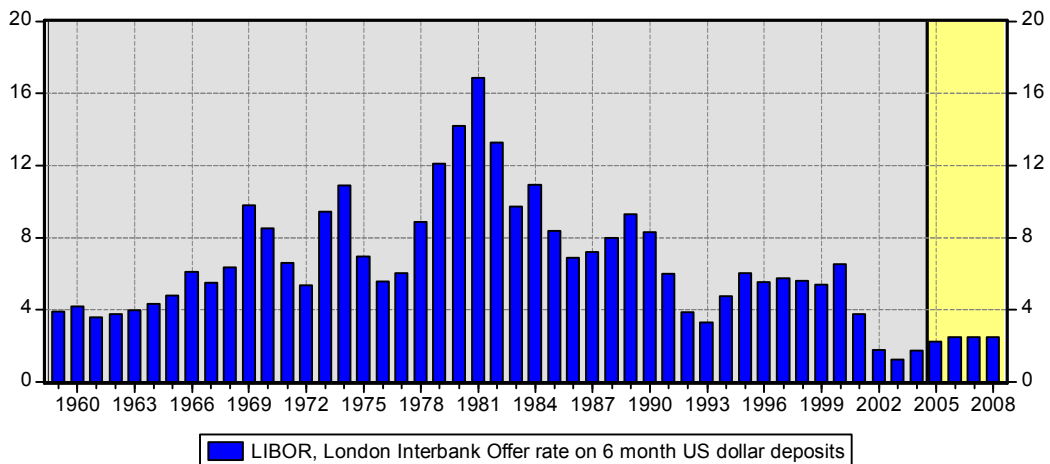
Dollars per barrel



- International interest rate

LIBOR, London Interbank Offer Rates on 6 month US dollar deposits for 2004-2005 have been derived from International Financial Statistics (IFS) of International Monetary Fund (IMF). Value of 2.5% was assigned for 2006-2008 period.⁵

%



Assumed values are according to following table:

⁵ This increase has been calculated from:
http://www.essenhyp.com/en/investor_relations/forecast_meeting/forecast_meeting_22_03_05.php

Assumed values for all exogenous variables

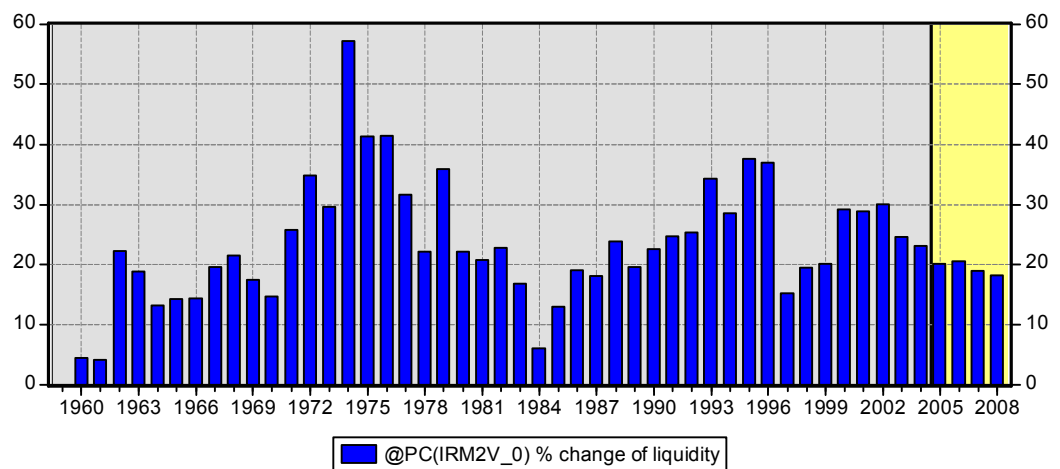
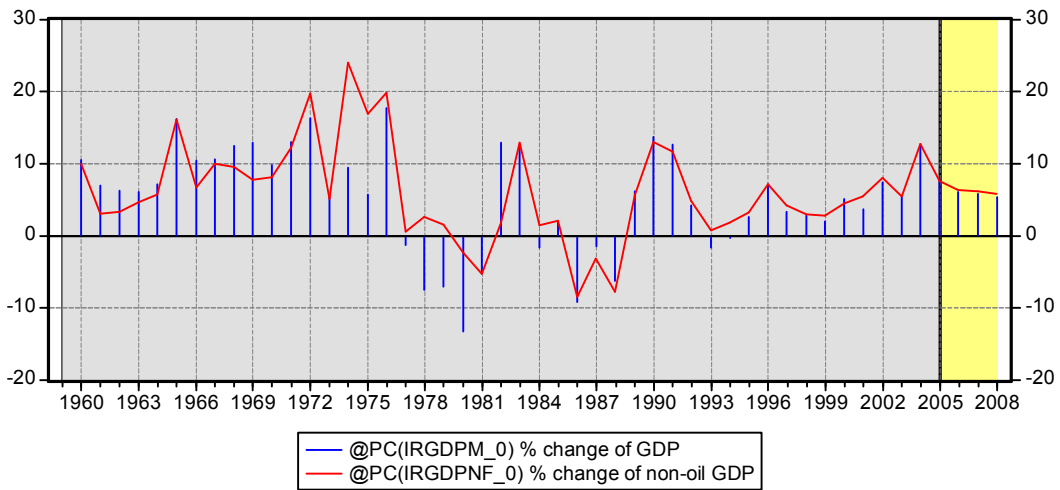
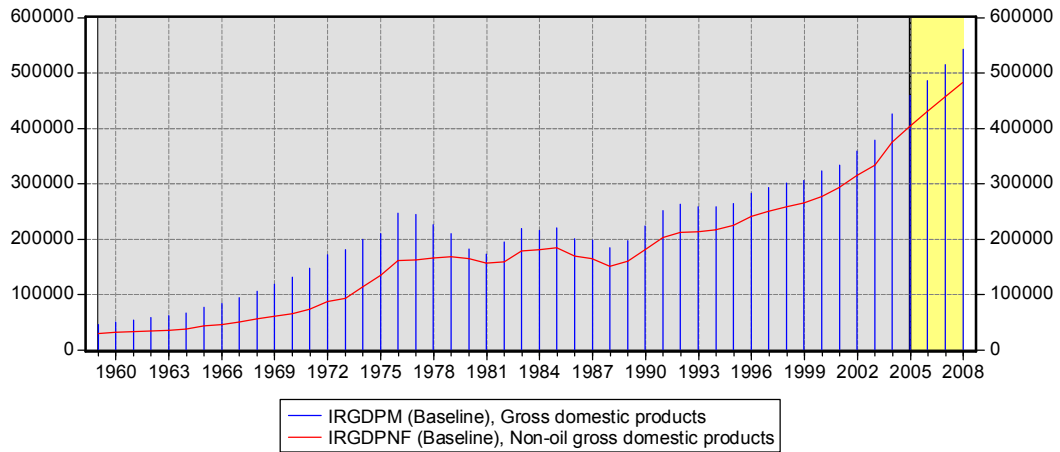
Variables	2003	2004	2005	2006	2007	2008
IRYEAR	1382	1383	1384	1385	1386	1387
IRKAD	4015	3633	2800	2800	2800	2800
OECDP	110.958	112.733	114.2	115.7	117.2	118.7
IRCIFP	92.465	93.945	95.165	96.4	97.6	98.9
IRWPOIL	28.10503	35.5	33.7	34.2	34.6	35
IRYOILB	1363.64	1490	1610	1650	1690	1710
IREO	8282	8700	9095	9850	10600	11500
IREX	8282	8700	9095	9850	10600	11500
LIBOR	1.23	1.73	2.23	2.5	2.5	2.5
IRFEOAV	34755.4	35955.7	35955.7	35955.7	35955.7	35955.7
IRGECV	282137.5	317672.9	383000	421300	463430	509800
IRGEDV	60986.6	99089.8	113000	124300	136730	150400
IRPDOIL	407.3479	470.47	470.47	541	662	715
IRIRL	15.4597	14.4597	14.4597	14.4597	14.4597	14.4597
IRIRS	10.2	10.2	10.2	10.2	10.2	10.2
IRMACHIMV	0.35049	0.35	0.35	0.35	0.35	0.35
IROLGV	1750	750	600	450	300	150
IROLPV	2860	2250	1800	1350	900	450

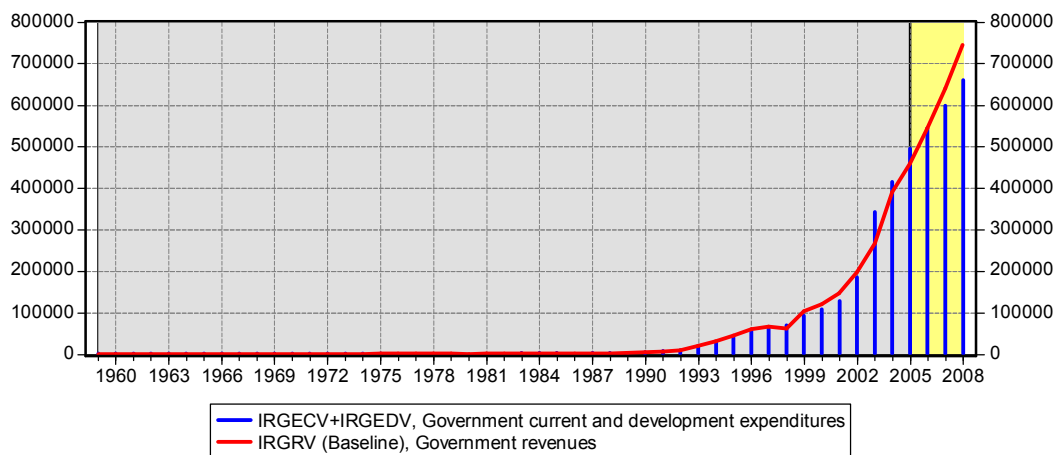
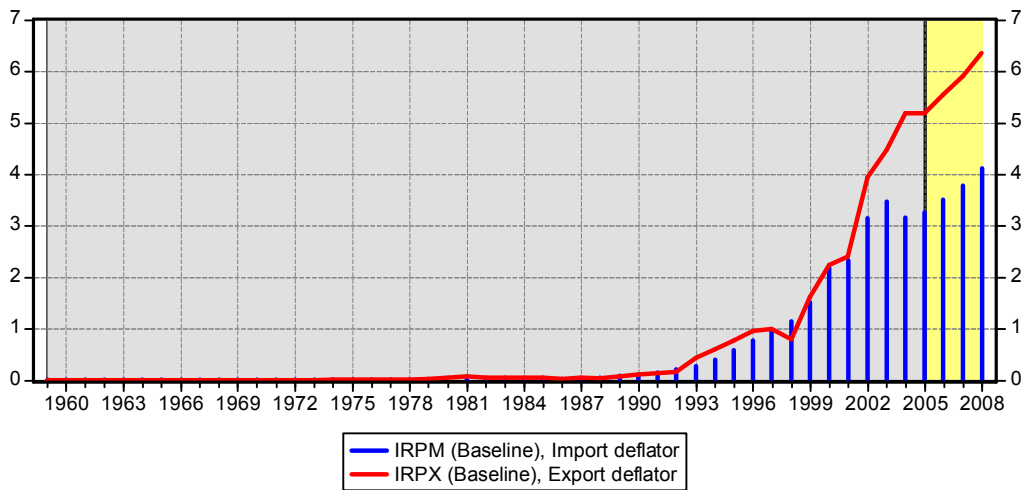
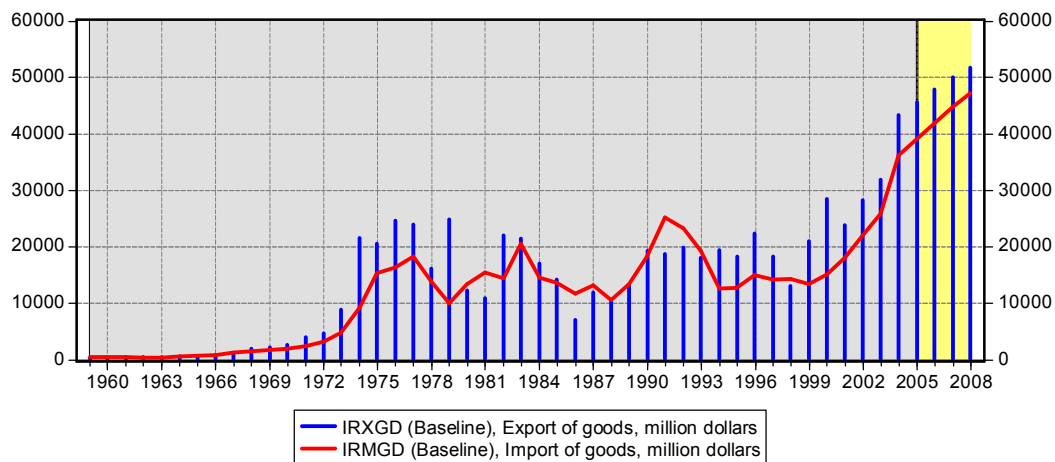
4. Forecast summary

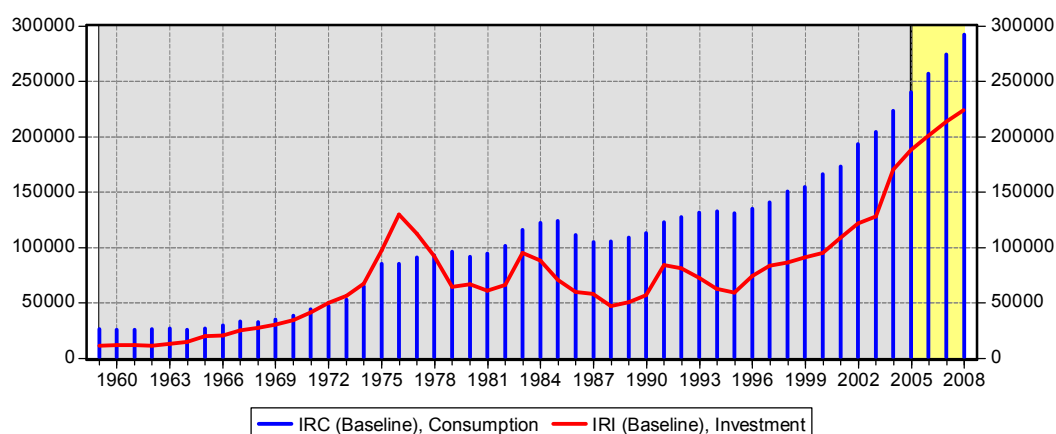
The following table shows the forecast of the Macroeconometric Model of Iran Version 6.1 for some selected variables. As it mentioned earlier the oil price forecast is a major and determinant factor in Iran's economy prediction. This will be the main sources of overforecasting/underforecasting of the model.

Forecast of the main Iran's macroeconomic variables

Christian Year	2003	2004	2005	2006	2007	2008
Iranian year	1382	1383	1384	1385	1386	1387
Private consumption at constant prices, billion Rials	204374	223818	240620	257294	274714	292648
% ch		9.5%	7.5%	6.9%	6.8%	6.5%
Investment at constant prices, billion Rials	128620	170587	188167	201090	213760	224464
% ch		32.6%	10.3%	6.9%	6.3%	5.0%
Gross domestic product at market prices at constant prices, billion Rials	378521	426117	459234	486822	515156	542794
% ch		12.6%	7.8%	6.0%	5.8%	5.4%
Non-oil gross domestic product at market prices at constant prices, billion Rials	333259	375588	404203	430016	456638	483347
% ch		12.7%	7.6%	6.4%	6.2%	5.8%
Employment, thousands	18695	19738	20587	21425	22307	23256
% ch		5.6%	4.3%	4.1%	4.1%	4.3%
Unemployment, thousands	2725.3	2678.7	2925.8	3293.7	3741	4259.5
% ch		-1.7%	9.2%	12.6%	13.6%	13.9%
Non-organized market interest rate	60.6	70.8	67.6	57.4	54.5	65.9
% ch		16.8%	-4.5%	-15.1%	-5.1%	20.9%
Liquidity, billion Rials	519939	640461	769380	927309	1103274	1304714
% ch		23.2%	20.1%	20.5%	19.0%	18.3%
Import of goods, million Dollars	25873	36166	39112	41904	44795	47141
% ch		39.8%	8.1%	7.1%	6.9%	5.2%
Import of services, million Dollars	9860	11374	12321	13050	13826	14615
% ch		15.4%	8.3%	5.9%	5.9%	5.7%
Export of oil, million barrels/year	938.2	1056.8	1169.3	1206.9	1244.4	1263.2
% ch		12.6%	10.6%	3.2%	3.1%	1.5%
Export of non-oil goods, million Dollars	5458.1	5799.1	6146.1	6543.9	6984.2	7450.7
% ch		6.2%	6.0%	6.5%	6.7%	6.7%
Export of services, million Dollars	6071	7205	8229	9282	10402	11610
% ch		18.7%	14.2%	12.8%	12.1%	11.6%
Export of oil, million Dollars	26368	37515	39407	41275	43056	44211
% ch		42.3%	5.0%	4.7%	4.3%	2.7%
Current account, million Dollars	3481	4011	3351	3122	2765	2427
% ch		15.2%	-16.5%	-6.8%	-11.4%	-12.2%
Balance of payments, million Dollars	4706	7189.5	4757	4615.5	4375.9	4161.1
% ch		52.8%	-33.8%	-3.0%	-5.2%	-4.9%
Terms of trade, billion Rials	17726	46201	47275	49508	51782	52607
% ch		160.6%	2.3%	4.7%	4.6%	1.6%
Gross domestic product implicit price deflator	2.96	3.26	3.49	3.77	4.06	4.42
% ch		10.1%	7.1%	8.0%	7.7%	8.9%
Import implicit price deflator	3.48	3.17	3.27	3.53	3.78	4.12
% ch		-8.9%	3.2%	8.0%	7.1%	9.0%
Export implicit price deflator	4.49	5.2	5.19	5.56	5.92	6.36
% ch		15.8%	-0.2%	7.1%	6.5%	7.4%
Consumer price index	242.6	260.3	287.3	311	334.7	368.4
% ch		7.3%	10.4%	8.2%	7.6%	10.1%
Wholesale price index	216.5	224.4	241.1	257.7	274.2	297.4
% ch		3.6%	7.4%	6.9%	6.4%	8.5%







5. Policy issues and uncertainty

Iran's economy has experienced many qualitative changes during the last 3 decades and in this regard, model building in an econometric framework based on historical data may have some weaknesses in comparison with other economies. This problem comes from unstable and indisciplinary volatile changes in economic variables caused some events by structural changes of the economy.

Price of crude oil has a very important role in Iran's economy. Using accurate forecast of this exogenous variable in the national model will create more accurate forecast for other variables engaged. The applied forecast values for this variable are not desirable figures, because the international predicted figures themselves suffer from qualitative changes in the oil market.

Future structural changes of Iran's economy are not predictable. These changes belong to the category of qualitative data and the amount of their effects on the economy which are not simply measurable. Political environment effects are not negligible in the economy. However, it is predictable that some political changes as scheduled presidential election in 2005 with un-measurable effects will be occurred in Iran. In this regard, the positions of United States and Europe about Iran are important, especially in the case of US sanctions and regional turmoil in Iraq and Afghanistan.

However, the above reasons will be the main sources of discrepancies between actual and predicted values of the model for Iran's economy.