

# **MACOECONOMETRIC MODEL OF IRAN'S ECONOMY**

**Version 5.0**

(Brief technical document)

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## General Features

'Total number of behavioral equations: .....	200
'Number of stochastic equations: .....	65
'Number of identities: .....	135
'Number of endogenous variables: .....	200
'Number of exogenous policy variables : .....	20
'Number of exogenous slack variables : .....	4
'Total number of exogenous variables: .....	62
'Number of lagged endogenous variables: .....	108
'Total number of predetermined variables: .....	170
'Total number of variables: .....	370
'Number of coefficients: .....	208

### *'List of exogenous policy variables:*

'1	IRKAD:	Capital account in balance of payments, million Dollars
'2	OECDP:	Foreign consumer price index of industrial countries
'3	IRCIFP:	Import CIF price index
'5	IRWPOIL:	Weighted price of Iran's oil in international markets, Dollars
'6	IRYOILB:	Production of oil, million barrels per year
'7	IREO:	Official exchange rate, Rials/Dollar
'8	IREX:	Export exchange rate, Rials/Dollar
'9	LIBOR:	London inter bank offer rate, percent
'10	IRFEOAV:	Foreign exchange obligation account, billion Rials
'11	IRGRDSV:	Sales of Dollars at exchange unofficial market, billion Rials
'12	IRGECV:	Government current expenditures, billion Rials
'13	IRGEDV:	Government development expenditures, billion Rials
'14	IRGESPV:	Government special payments expenditures, billion Rials
'15	IRGEFIV:	Government foreign investment expenditures, billion Rials
'16	IRPDOIL:	Index of domestic price of oil products
'17	IRIRS:	Saving deposits weighted average interest rate (banking system)
'18	IRIRL:	Loans weighted average interest rate (banking system)
'19	IROLPV:	Government budget obligatory loans granted to private sector
'20	IROLGV:	Government budget obligatory loans granted to government sector
'21	IRMACHIMV:	Ratio of import of machineries and equipments to total current import

### *'List of exogenous slack variables:*

'IRWARCD:	War damages on construction
'IRWARED:	War damages on equipment
'IRWARMD:	War damages on materials
'IRYEAR:	Iranian year

### *'Dummy variables definition:*

'General features of dummy variables are as indicated by following expressions:

$00 \geq cd \geq 05$  '59  $\geq ab \geq 99$  'a, b, c, d are digits

'The symbols "a", "b", "c" and "d" are numeric digits.

'IRDab = {1: For the year 19(20)ab ; 0: Otherwise}

'IRDabcd = {1: for the period of 19(20)ab to 19(20)cd ; 0: Otherwise I cd=00 refers to the year 2000}

'All dates are in Gregorian calendar, to convert to Iranian year decrease Iranian year number by 621.

### *'List of endogenous variables*

IRTBD	'1:Balance of trade, million Dollars
IRSD	'2:Balance of services, million Dollars
IRCAD	'3:Current account, million Dollars
IRBOPD	'4:Balance of payments, million Dollars
IRXGD	'5:Export of goods, million Dollars
IRXNFSD	'6:Export of non-factor services, million Dollars
IRMNFSD	'7:Import of non-factor services, million Dollars
IRXGNOD	'8:Export of non-oil goods, million Dollars
IRMGD	'9:Import of goods, million Dollars
IRXSD	'10:Export of services, million Dollars
IRMSD	'11:Import of services, million Dollars
IRFYSBD	'12:Balance of factor income services, million Dollars
IRNFSD	'13:Balance of non-factor income services, million Dollars
IRBOPDC	'14:Cumulative balance of payments, million Dollars
IRBOPEOD	'15:Balance of payments errors and omissions, million Dollars
IRKADC	'16:Cumulative capital account, million Dollars
IRCADC	'17:Cumulative current account, million Dollars
IRTBDC	'18:Cumulative balance of trade, million Dollars
IRSBDC	'19:Cumulative balance of services, million Dollars
IRNTRD	'20:Net transfers, million Dollars
IRFYSBDC	'21:Cumulative factor income services balance, million Dollars
IRNFSDC	'22:Cumulative non-factor income services balance, million Dollars
IRXOILD	'23:Export of oil, million Dollars
IRXOILB	101:Export of oil, million barrels/year
IRXNFSDOP	'102:Export of non-factor services, million Dollars
IRMNFSDCIFP	'103:Import of non-factor services, million Dollars
IRMGDCIFP	'104:Real import of goods, million Dollars
IRXGNODOP	'105:Real export of non-oil goods, million Dollars
IRMFYSD	'106:Import of factor income services, million Dollars
IRXFYSD	'107:Export of factor income services, million Dollars
IRBOPEODC	'108:Cumulative balance of payments errors and omissions, million Dollars
IRNTRDC	'109:Cumulative net transfers, million Dollars
IRM2NGV	'201:Net claim of banking system to government sector (including public government), billion Rials

IRM2NGGV	'202:Net claim of banking system to public government, billion Rials
IRM2NGSV	'203:Net claim of banking system to government sector (excluding public government) at constant prices, billion Rials
IRM2NPV	'204:Net claim of banking system to private sector at constant prices, billion Rials
IROLVC	'205:Cumulative obligatory loans in government budget, billion rials
IROLV	'206:Obligatory loans in government budget, billion rials
IRDDV	'207:Demand deposits of private sector, billion Rials
IRSDV	'208:Saving and time deposits of private sector, billion Rials
IRCUV	'209:Currency in hands of public, billion Rials
IRM2V	'210:Liquidity, billion Rials
IRM2NFAV	'211:Net foreign assets of banking system, billion Rials
IRM2N WV	'212:Net worth and other items net of banking system, billion Rials
IRM2NPVPGDPM	'301:Net claim of banking system to private sector at constant prices, billion Rials
IRM2NGSVPGDPM	'302:Net claim of banking system to government sector (excluding public government) at constant prices, billion Rials
IRM2NFAD	'303:Net foreign assets of banking system, million Dollars
IRDDVPGDPM	'304:Real demand deposits of private sector, billion Rials
IRSDVPGDPM	'305:Real saving and time deposits of private sector, billion Rials
IRCUVPGDPM	'306:Real currency in hands of public, billion Rials
IRGBDVC	'401:Cumulative government budget deficit, billion Rials
IRGRV	'402:Government revenue, billion Rials
IRGRTV	'403:Government tax revenue, billion Rials
IRGEV	'404:Government expenditure, billion Rials
IRGBDV	'405:Government budget deficit, billion Rials
IRGESV	'406:Government special expenditures, billion Rials
IRGEFIDC	'407:Cumulative government expenditures in foreign investment, million Dollars
IRGRTIV	'501:Government indirect tax revenue, billion Rials
IRGROILV	'502:Government oil revenue, billion Rials
IRGRMV	'503:Government miscellaneous revenue, billion Rials
IRGRSV	'504:Government special revenue, billion Rials
IRGRTDV	'505:Government direct tax revenue, billion Rials
IRAD	'601: Real aggregate demand, billion Rials
IRAS	'602: Real aggregate supply, billion Rials
IROUTPUT	'603:Real aggregate output, billion Rials
IRGNS	'604:Real gross national saving, billion Rials
IRNNS	'605:Real net national saving , billion Rials
IRX	'606:Real export, billion Rials
IRM	'607:Real import, billion Rials
IRBOT	'608: Real balance of trade , billion Rials
IRGDEM	'609: Real gross domestic expenditure at market prices, billion Rials
IRSP	'610: Private saving, billion Rials
IRTOT	'611:Terms of trade, billion Rials
IRGDIM	'612:Real gross domestic income at market prices, billion Rials

IRDIS	'613:Real discrepancies, billion Rials
IRGNPM	'614:Real gross national product at market prices, billion Rials
IRGNIM	'615:Real gross national income at market prices, billion Rials
IRNNIF	'616:Real net national income at factor cost, billion Rials
IRNFY	'617:Real net factor income, billion Rials
IRNIT	'618:Net indirect taxes, billion Rials
IRK	'619:Real capital stock, billion Rials
IRGDPM	'620:Real gross domestic product at market prices, billion Rials
IRYD	'621:Real disposable income, billion Rials
IRI	'622:Real investment, billion Rials
IRIT	'623:Real indirect taxes, billion Rials
IRSUB	'624:Real subsidies, billion Rials
IRGDPF	'625:Real gross domestic product at factor cost, billion Rials
IRIG	'701:Real government investment, billion Rials
IRG	'702:Real government consumption, billion Rials
IRGDPNF	'703:Real non-oil gross domestic product at market price, billion Rials
IRMG	'704:Real import of goods, billion Rials
IRMNFS	'705:Real import if non-factor services, billion Rials
IRIP	'706:Real private investment, billion Rials
IRVAOIL	'707:Real value added of oil, billion Rials
IRCCA	'708:Real capital consumption allowances, billion Rials
IRC	'709:Real private consumption, billion Rials
IRXFY	'710:Export of factor income from abroad, billion Rials
IRMFY	'711:Import of factor income from abroad, billion Rials
IRXOIL	'712:Real oil export, billion Rials
IRXNOILG	'713:Real export of goods, billion Rials
IRXNFS	'714:Real export of non factor services, billion Rials
IRINPUT	'715:Real input of production, billion Rials
IRII	'716:Real changes in inventory, billion Rials
IRADV	'801: Nominal aggregate demand, billion Rials
IRASV	'802: Nominal aggregate supply, billion Rials
IROUTPUTV	'803: Nominal aggregate output, billion Rials
IRINPUTV	'804: Nominal aggregate input, billion Rials
IRGNSV	'805:Real gross national saving , billion Rials
IRNNSV	'806:Real net national saving , billion Rials
IRXV	'807:Nominal export, billion Rials
IRMV	'808:Nominal import, billion Rials
IRBOTV	'809: Nominal balance of trade, billion Rials
IRGDEM	'810: Nominal gross domestic expenditure at market prices, billion Rials
IRSPV	'811: Nominal private saving, billion Rials
IRKV	'812:Nominal capital stock, billion Rials
IRGDIMV	'813:Nominal gross domestic income at market price, billion Rials
IRGNIMV	'814:Nominal gross national income at market price, billion Rials
IRNNIFV	'815:Nominal net national income at factor cost, billion Rials

IRGDPNFV	'816:Nominal non-oil gross domestic product at market price, billion Rials
IRGNPMV	'817:Nominal gross national products at market price, billion Rials
IRGDPMV	'818:Nominal gross domestic products at market price, billion Rials
IRYDV	'819:Nominal disposable income, billion Rials
IRCCA	'820:Nominal capital consumption allowances, billion Rials
IRIV	'821:Nominal investment, billion Rials
IRDISV	'822:Nominal discrepancies, billion Rials
IRNITV	'823:Nominal net indirect taxes, billion Rials
IRNFYV	'824:Nominal net factor income, billion Rials
IRGDPFV	'825:Gross domestic product at factor cost, billion Rials
IRGV	'901:Nominal government consumption, billion Rials
IRIGV	'902:Nominal government investment, billion Rials
IRSUBV	'903:Nominal subsidies, billion Rials
IRCV	'904:Nominal private consumption, billion Rials
IRVAOILV	'905:Nominal value added of oil sector, billion Rials
IRMGV	'906:Nominal import of goods, billion Rials
IRMNFSV	'907:Nominal import of non-factor services, billion Rials
IRXFYV	'908:Nominal export of factor income from abroad, billion Rials
IRMFYV	'909:Nominal import of factor income from abroad, billion Rials
IRITV	'910:Nominal indirect taxes, billion Rials
IRIPV	'911:Nominal private investment, billion Rials
IRXOILV	'912:Nominal oil export, billion Rials
IRXNOILGV	'913:Nominal non-oil goods export, billion Rials
IRXNFSV	'914:Nominal non-factor services export, billion Rials
IRIIV	'915:Nominal changes in inventory, billion Rials
IRPA	'1001: Agregate price deflator
IRPGDPF	'1002: Gross domestic product at factor cost price deflator
IRPGNS	'1003:Gross national saving price deflator
IRPNNS	'1004:Net national saving price deflator
IRPMG	'1005:Import of goods price deflator
IRPMNFS	'1006:Import of non factor services price deflator
IRPXOIL	'1007:Export of oil price deflator
IRPXNOILG	'1008:Export of non-oil goods price deflator
IRPXNFS	'1009:Export of non-factor services price deflator
IRPBOT	'1010: Balance of trade price deflator
IRPGDEM	'1011: Gross domestic expenditure at market prices price deflator
IRPSP	'1012: Private saving price deflator
IRPK	'1013:Capital stock price deflator
IRPGDPM	'1014:Gross domestic product price deflator
IRPC	'1015:Private consumption price deflator
IRPIG	'1016:Government investment price deflator
IRPIP	'1017:Private investment price deflator
IRPG	'1018:Government consumption price deflator
IRPNIT	'1019:Net indirect taxes price deflator

IRPM	'1020:Import price deflator
IRPX	'1021:Export price deflator
IRPNFY	'1022:Net factor income from abroad price deflator
IRPXFY	'1023:Export of factor income from abroad price deflator
IRPMFY	'1024:Import of factor income from abroad price deflator
IRPVAOIL	'1025:Oil value added price deflator
IRPI	'1026:Investment price deflator
IRINFCPI	'1027:Inflation rate for consumer price index
IRINFWPI	'1028:Inflation rate for whole sale price index
IRPGNPM	'1029:Gross national product price deflator
IRPDIS	'1030:Discrepancies price deflator
IRPGDIM	'1031:Gross domestic income price deflator
IRPGNIM	'1032:Gross national income price deflator
IRPYD	'1033:Disposable income price deflator
IRPNNIF	'1034:Net national income price deflator
IRPGDPNF	'1035:Non-oil gross domestic product price deflator
IRPIT	'1036: Indirect taxes price deflator
IRPSUB	'1037: Subsidies price deflator
IRPOUTPUT	'1038: Output price deflator
IRPII	'1039: Changes in inventory price deflator
IREM	'2001:Market exchange rate, Rials/Dollar '2002:Effective exchange rate for non-oil goods and services, Rials/Dollar
IREENOIL	
IRWPIM	'2003:Whole sale price index for imported goods
IRWPIX	'2004:Whole sale price index for exported goods '2005:Whole sale price index for domestically produced and consumed goods
IRWPID	
IRWPI	'2006:Whole sale price index
IRCPI	'2007:Consumer price index
IRIRNB	'2008:Non-organized market interest rate
IRPCCA	'2009:Capital consumption allowances price deflator
IRPINPUT	'2010: Input price deflator
IRWIND	'3001:Wage index
IRPOPA	'3002:Active population, thousand persons
IRUNEMP	'3003:Unemployment, thousand persons
IRUNEMPR	'3004:Unemployment rate, percent
IRPOPAPOP	'3101:Active population ratio
IRPOP	'3102:Population, thousand persons
IRWINDPGDPM	'3103:Real wage index
IREMP	'3104:Employment, thousand persons



## System of Equations

### 'Foreign sector

'1:Balance of trade, million Dollars

$$\text{IRTBD} = \text{IRXGD} - \text{IRMGD}$$

'2:Balance of services, million Dollars

$$\text{IRSBD} = \text{IRXSD} - \text{IRMSD}$$

'3:Current account, million Dollars

$$\text{IRCAD} = \text{IRTBD} + \text{IRSBD} + \text{IRNTRD}$$

'4:Balance of payments, million Dollars

$$\text{IRBOPD} = \text{IRCAD} + \text{IRKAD} + \text{IRBOPEOD}$$

'5:Export of goods, million Dollars

$$\text{IRXGD} = \text{IRXOILD} + \text{IRXGNOD}$$

'6:Export of non-factor services, million Dollars

$$\text{IRXNFSD} = \text{IRXNFSDOP} * \text{OECDP}$$

'7:Import of non-factor services, million Dollars

$$\text{IRMNFSD} = \text{IRMNFSDCIFP} * \text{IRCIFP}$$

'8:Export of non-oil goods, million Dollars

$$\text{IRXGNOD} = \text{IRXGNODOP} * \text{OECDP}$$

'9:Import of goods, million Dollars

$$\text{IRMGD} = \text{IRMGDCIFP} * \text{IRCIFP}$$

'10:Export of services, million Dollars

$$\text{IRXSD} = \text{IRXNFSD} + \text{IRXFYSD}$$

'11:Import of services, million Dollars

$$\text{IRMSD} = \text{IRMNFSD} + \text{IRMFYSD}$$

'12:Balance of factor income services, million Dollars

$$\text{IRFYSD} = \text{IRXFYSD} - \text{IRMFYSD}$$

'13:Balance of non-factor income services, million Dollars

$$\text{IRNFSD} = \text{IRXNFSD} - \text{IRMNFSD}$$

'14:Cumulative balance of payments, million Dollars

$$\text{IRBOPDC} = \text{IRBOPDC}(-1) + \text{IRBOPD}$$

'15:Balance of payments errors and omissions, million Dollars

$$\text{IRBOPEOD} = \text{IRBOPEODC} - \text{IRBOPEODC}(-1)$$

'16:Cumulative capital account, million Dollars

$$\text{IRKADC} = \text{IRKADC}(-1) + \text{IRKAD}$$

'17:Cumulative current account, million Dollars

$$\text{IRCADC} = \text{IRCADC}(-1) + \text{IRCAD}$$

'18:Cumulative balance of trade, million Dollars

$$\text{IRTBDC} = \text{IRTBDC}(-1) + \text{IRTBDC}$$

'19:Cumulative balance of services, million Dollars

$$\text{IRSBDC} = \text{IRSBDC}(-1) + \text{IRSBDC}$$

'20:Net transfers, million Dollars

$$\text{IRNTRD} = \text{IRNTRDC} - \text{IRNTRDC}(-1)$$

'21:Cumulative factor income services balance, million Dollars

$$\text{IRFYSBDC} = \text{IRFYSBDC}(-1) + \text{IRFYSBDC}$$

'22:Cumulative non-factor income services balance, million Dollars

$$\text{IRNFSBDC} = \text{IRNFSBDC}(-1) + \text{IRNFSBDC}$$

'23:Export of oil, million Dollars

$$\text{IRXOILD} = \text{IRWPOIL} * \text{IRXOILB}$$

'101:Export of oil, million barrels/year

$$\text{IRXOILB} = \text{IRXOILB}(-1) + \text{B}(1011) * (\text{IRYOILB} - \text{IRYOILB}(-1))$$

'102:Export of non-factor services, million Dollars

$$\text{IRXNFSBDC} = \text{IRXNFSBDC}(-1) + \text{B}(1021) * \text{IREENOIL} + \text{B}(1022) * (\text{IRGDPNF} - \text{IRGDPNF}(-1)) + \text{B}(1023) * \text{IRD79}$$

'103:Import of non-factor services, million Dollars

$$\text{IRMNFSBDCIFP} = \text{IRMNFSBDCIFP}(-1) + \text{B}(1030) + \text{B}(1031) * (\text{IREENOIL} * \text{IRCIFP} / \text{IRWPI} - \text{IREENOIL}(-1) * \text{IRCIFP}(-1) / \text{IRWPI}(-1)) + \text{B}(1032) * (\text{IRGDPM} - \text{IRGDPM}(-1)) + \text{B}(1033) * (\text{IRD77} + \text{IRD79}) + \text{B}(1034) * \text{IRD88}$$

'104:Real import of goods, million Dollars

$$\text{IRMGDCIFP} = \text{B}(1040) + \text{B}(1041) * (\text{IRXGD} + \text{IRXSD}) + \text{B}(1042) * \text{IREENOIL} + \text{B}(1043) * \text{IRGDPM} + \text{B}(1044) * \text{IRCIFP} + \text{B}(1045) * \text{IRKAD} + \text{B}(1046) * \text{IRD79}$$

'105:Real export of non-oil goods, million Dollars

$$\text{IRXGNODOP} = \text{B}(1050) + \text{B}(1051) * \text{IREX} * \text{OECDP} / \text{IRWPI} + \text{B}(1052) * \text{IRXGNODOP}(-1) + \text{B}(1053) * \text{IRGDPNF}$$

'106:Import of factor income services, million Dollars

$$\text{IRMFYSD} = \text{B}(1060) + (\text{B}(1061) + \text{B}(1062) * (1 - \text{IRD5977})) * \text{IRKADC} * \text{LIBOR} / 100 + \text{B}(1063) * \text{IRMFYSD}(-1) + \text{B}(1064) * \text{IRD5978} * \text{IRMGD} + \text{B}(1065) * \text{IRD5977}$$

'107:Export of factor income services, million Dollars

$$\text{IRXFYSD} = \text{B}(1070) + \text{B}(1071) * \text{IRGEFIDC} + \text{B}(1072) * (1 - \text{IRD5978}) + \text{B}(1073) * \text{IRXFYSD}(-1)$$

'108:Cumulative balance of payments errors and omissions, million Dollars

$$\text{IRBOPEODC} = (\text{B}(1080) + \text{B}(1081) * \text{IRKADC} + \text{B}(1082) * \text{IRTBDC} + \text{B}(1083) * \text{IRFYSBDC} + \text{B}(1084) * \text{IRNFSBDC}) * (1 + \text{B}(1085) * \text{IRD5970}) + \text{B}(1086) * \text{IRD84}$$

'109:Cumulative net transfers, million Dollars  
 $IRNTRDC = IRNTRDC(-1) + (B(1090) + B(1091) * IRKADC + B(1092) * IRTBDC + B(1093) * IRFYSBDC + B(1094) * IRNFSBDC + B(1095) * IRBOPEODC) * (1 + B(1096) * IRD5988)$

### 'Monetary sector

'201:Net claim of banking system to government sector (including public government), billion Rials

$$IRM2NGV = IRM2NGGV + IRM2NGSV$$

'202:Net claim of banking system to public government, billion Rials

$$IRM2NGGV = IRGBDVC + IRFEOAV + IROLVC$$

'203:Net claim of banking system to government sector (excluding public government) at constant prices, billion Rials

$$IRM2NGSV = IRM2NGSVPGDPM * IRPGDPM$$

'204:Net claim of banking system to private sector at constant prices, billion Rials

$$IRM2NPV = IRM2NPVPGDPM * IRPGDPM$$

'205:Cumulative obligatory loans in government budget, billion rials

$$IROLVC = IROLVC(-1) + IROLV$$

'206:Obligatory loans in government budget, billion rials

$$IROLV = IROLPV + IROLV$$

'207:Demand deposits of private sector, billion Rials

$$IRDDV = IRDDVPGDPM * IRPGDPM$$

'208:Saving and time deposits of private sector, billion Rials

$$IRSDV = IRSDVPGDPM * IRPGDPM$$

'209:Currency in hands of public, billion Rials

$$IRCUV = IRCUVPGDPM * IRPGDPM$$

'210:Liquidity, billion Rials

$$IRM2V = IRCUV + IRDDV + IRSDV$$

'211:Net foreign assets of banking system, billion Rials

$$IRM2NFAV = IRM2NFAD / (((1 - IRD93 - IRD90 - IRD91 - IRD92) / IREO + IRD93 / 1748 + IRD90 / 221.89 + IRD91 / 351.9 + IRD92 / 641.2) * 1000)$$

'212:Net worth and other items net of banking system, billion Rials

$$IRM2NWV = IRM2V - (IRM2NPV + IRM2NGV + IRM2NFAV)$$

'301:Net claim of banking system to private sector at constant prices, billion Rials

$$IRM2NPVPGDPM = IRM2NPVPGDPM(-1) + B(3011) * IRIRL + B(3012) * IRD7576$$

'302:Net claim of banking system to government sector (excluding public government) at constant prices, billion Rials

$$\text{IRM2NGSVPGDPM} = \text{B}(3020) + \text{B}(3021) * \text{IRM2NGSVPGDPM}(-1) + \text{B}(3022) * \text{IRIRL} + \text{B}(3023) * \text{IRD9497} + \text{B}(3024) * \text{IRD5978} * \text{IRM2NGSVPGDPM}(-1)$$

'303:Net foreign assets of banking system, million Dollars

$$\text{IRM2NFAD} = \text{B}(3031) * \text{IRBOPDC} + \text{B}(3032) * \text{IRM2NFAD}(-1) + \text{B}(3033) * \text{IRD8589} + \text{B}(3034) * \text{IRD9705}$$

'304:Real demand deposits of private sector, billion Rials

$$\text{IRDDVPGDPM} = \text{B}(3041) * \text{IRGDPM} + \text{B}(3042) * \text{IRDDVPGDPM}(-1) + \text{B}(3043) * \text{IRIRS} + \text{B}(3044) * \text{IRIRNB}$$

'305:Real saving and time deposits of private sector, billion Rials

$$\text{IRSDVPGDPM} = \text{B}(3050) + \text{B}(3051) * \text{IRGDPM} + \text{B}(3052) * \text{IRIRS} + \text{B}(3053) * \text{IRSDVPGDPM}(-1)$$

'306:Real currency in hands of public, billion Rials

$$\text{IRCUVPGDPM} = \text{B}(3060) + \text{B}(3061) * \text{IRCUVPGDPM}(-1) + \text{B}(3062) * \text{IRGDPM} + \text{B}(3063) * \text{IRD5977} + \text{B}(3064) * \text{IRIRL} + \text{B}(3065) * \text{IRIRNB} + \text{B}(3066) * \text{IRD79}$$

### 'Government sector

'401:Cumulative government budget deficit, billion Rials

$$\text{IRGBDVC} = \text{IRGBDVC}(-1) - \text{IRGBDV}$$

'402:Government revenue, billion Rials

$$\text{IRGRV} = \text{IRGROILV} + \text{IRGRTV} + \text{IRGRMV} + \text{IRGRDSV} + \text{IRGRSV}$$

'403:Government tax revenue, billion Rials

$$\text{IRGRTV} = \text{IRGRTDV} + \text{IRGRTIV}$$

'404:Government expenditure, billion Rials

$$\text{IRGEV} = \text{IRGECV} + \text{IRGEDV} + \text{IRGESV} + \text{IRGESPV} + \text{IRGEFIV}$$

'405:Government budget deficit, billion Rials

$$\text{IRGBDV} = \text{IRGRV} - \text{IRGEV}$$

'406:Government special expenditures, billion Rials

$$\text{IRGESV} = \text{IRGRSV}$$

'407:Cumulative government expenditures in foreign investment, million Dollars

$$\text{IRGEFIDC} = \text{IRGEFIDC}(-1) + \text{IRGEFIV} / \text{IREO} * 1000$$

'501:Government indirect tax revenue, billion Rials

$$\text{IRGRTIV} = \text{IRGRTIV}(-1) + \text{B}(5011) * (\text{IRMGV} - \text{IRMGV}(-1)) + \text{B}(5012) * (\text{IROUTPUTV} - \text{IROUTPUTV}(-1)) - (\text{IRMGV} - \text{IRMGV}(-1))$$

'502:Government oil revenue, billion Rials

$$\text{IRGROILV} = \text{B}(5021) * (1 - \text{IRD93}) * \text{IREO} * (\text{IRXOILD} / 1000 - \text{IRGRDSV} / \text{IREM}) + \text{B}(5022) * \text{IRPDOIL} * (\text{IRYOILB} - \text{IRXOILB}) + \text{B}(5023) * \text{IRD93} * (0.58 * 1000 + 0.42 * (\text{IREO} - 1000)) * (\text{IRXOILD} / 1000 - \text{IRGRDSV} / \text{IREM}) + \text{B}(5024) * \text{IRD0005} + \text{B}(5025) * \text{IRD9597}$$

'503:Government miscellaneous revenue, billion Rials

$$\text{IRGRMV} = \text{IRGRMV}(-1) + \text{B}(5031) * (\text{IROUTPUTV} - \text{IROUTPUTV}(-1)) + \text{B}(5032) * \text{IRD00}$$

'504:Government special revenue, billion Rials

$$\text{IRGRSV} = \text{IRGRSV}(-1) + \text{B}(5040) * (\text{IROUTPUTV} - \text{IROUTPUTV}(-1))$$

'505:Government direct tax revenue, billion Rials

$$\text{IRGRTDV} = \text{IRGRTDV}(-1) + \text{B}(5051) * (\text{IROUTPUTV} - \text{IROUTPUTV}(-1))$$

### 'Real sector

'601: Real aggregate demand, billion Rials

$$\text{IRAD} = \text{IRINPUT} + \text{IRC} + \text{IRG} + \text{IRI} + \text{IRDIS} + \text{IRX} + \text{IRTOT}$$

'602: Real aggregate supply, billion Rials

$$\text{IRAS} = \text{IROUTPUT} + \text{IRNIT} + \text{IRM} + \text{IRTOT}$$

'603:Real aggregate output, billion Rials

$$\text{IROUTPUT} = \text{IRINPUT} + \text{IRGDPF}$$

'604:Real gross national saving, billion Rials

$$\text{IRGNS} = \text{IRI} + \text{IRII} + \text{IRBOT} + \text{IRNFY} + \text{IRTOT}$$

'605:Real net national saving , billion Rials

$$\text{IRNNS} = \text{IRGNS} - \text{IRCCA}$$

'606:Real export, billion Rials

$$\text{IRX} = \text{IRXOIL} + \text{IRXNOILG} + \text{IRXNFS}$$

'607:Real import, billion Rials

$$\text{IRM} = \text{IRMG} + \text{IRMNFS}$$

'608: Real balance of trade , billion Rials

$$\text{IRBOT} = \text{IRX} - \text{IRM}$$

'609: Real gross domestic expenditure at market prices, billion Rials

$$\text{IRGDEM} = \text{IRC} + \text{IRG} + \text{IRI} + \text{IRBOT} + \text{IRDIS}$$

'610: Private saving, billion Rials

$$\text{IRSP} = \text{IRYD} - \text{IRC}$$

'611:Terms of trade, billion Rials

$$\text{IRTOT} = 2 * ( (\text{IRXV} * \text{IRM}) - (\text{IRMV} * \text{IRX}) ) / (\text{IRXV} + \text{IRMV})$$

'612:Real gross domestic income at market prices, billion Rials

$$\text{IRGDIM} = \text{IRGDPM} + \text{IRTOT}$$

'613:Real discrepancies, billion Rials

$$\text{IRDIS} = \text{IRGDPM} - (\text{IRC} + \text{IRG} + \text{IRI} + \text{IRBOT})$$

'614:Real gross national product at market prices, billion Rials  
 $IRGNPM = IRGDPM + IRNFY$

'615:Real gross national income at market prices, billion Rials  
 $IRGNIM = IRGNPM + IRTOT$

'616:Real net national income at factor cost, billion Rials  
 $IRNNIF = IRGNIM - IRCCA - IRNIT$

'617:Real net factor income, billion Rials  
 $IRNFY = IRXFY - IRMFY$

'618:Net indirect taxes, billion Rials  
 $IRNIT = IRIT - IRSUB$

'619:Real capital stock, billion Rials  
 $IRK = IRK(-1) + IRI - IRCCA$

'620:Real gross domestic product at market prices, billion Rials  
 $IRGDPM = IRGDPNF + IRVAOIL + IRNIT$

'621:Real disposable income, billion Rials  
 $IRYD = IRGDPNF + IRNFY - IRCCA - IRGRTDV / IRPIT$

'622:Real investment, billion Rials  
 $IRI = IRIP + IRIG$

'623:Real indirect taxes, billion Rials  
 $IRIT = IRITV/IRPIT$

'624:Real subsidies, billion Rials  
 $IRSUB = IRSUBV/IRPSUB$

'625:Real gross domestic product at factor cost, billion Rials  
 $IRGDPF = IRGDPNF + IRVAOIL$

'701:Real government investment, billion Rials  
 $IRIG=IRIG(-1)+B(7011)*(IRGEDV/IRWPI-IRGEDV(-1)/IRWPI(-1))+B(7012)*IRD76+B(7013)*IRD77+B(7014)*IRD78+B(7015)*IRD79$

'702:Real government consumption, billion Rials  
 $IRG = IRG(-1)+B(7021)*((IRGECV+IRGESV)/IRWPI-(IRGECV(-1)+IRGESV(-1))/IRWPI(-1))$

'703:Real non-oil gross domestic product at market price, billion Rials  
 $IRGDPNF=B(7030)+B(7031)*IRK(-1)+B(7032)*(IRIP+IRIG-IRM*IRMACHIMV)+B(7033)*IREMP+B(7034)*IRM*IRMACHIMV+B(7035)*IRD79$

'704:Real import of goods, billion Rials  
 $IRMG = IRMG(-1)+B(7041)*(IRMGDCIFP - IRMGDCIFP(-1))$

'705:Real import if non-factor services, billion Rials  
 $IRMNFS=B(7051)*(IRMNFSDCIFP-IRMNFSDCIFP(-1))+B(7052)*IRMNFS(-1)$

'706:Real private investment, billion Rials

$$\text{IRIP} = \text{B}(7060) + \text{B}(7061) * \text{IRGDPNF}(-1) + \text{B}(7062) * \text{IRM} * \text{IRMACHIMV} + \text{B}(7063) * \text{IRIRL} + \text{B}(7064) * \text{IRD7779}$$

'707:Real value added of oil, billion Rials

$$\text{IRVAOIL} = \text{B}(7071) * \text{IRVAOIL}(-1) + \text{B}(7072) * (\text{IRXOILB} - \text{IRXOILB}(-1)) + \text{B}(7073) * ((\text{IRYOILB} - \text{IRXOILB}) - (\text{IRYOILB}(-1) - \text{IRXOILB}(-1)))$$

'708:Real capital consumption allowances, billion Rials

$$\text{IRCCA} = \text{B}(7080) + \text{B}(7081) * \text{IRK}(-1) + \text{B}(7082) * (\text{IRWARCD} + \text{IRWARDED} + \text{IRWARMD}) + \text{B}(7083) * \text{IRD01}$$

'709:Real private consumption, billion Rials

$$\text{IRC} = \text{B}(7091) * (\text{IRYD} - \text{IRYD}(-1)) + \text{B}(7092) * \text{IRSP}(-1) + \text{IRC}(-1)$$

'710:Export of factor income from abroad, billion Rials

$$\text{IRXFY} = \text{IRXFY}(-1) + \text{B}(7101) * (\text{IRXFYSD} / \text{OECDP} - \text{IRXFYSD}(-1) / \text{OECDP}(-1)) + \text{B}(7102) * \text{IRD7879}$$

'711:Import of factor income from abroad, billion Rials

$$\text{IRMFY} = \text{IRMFY}(-1) + \text{B}(7110) + \text{B}(7111) * (\text{IRMFYSD} / \text{OECDP} - \text{IRMFYSD}(-1) / \text{OECDP}(-1)) + \text{B}(7112) * \text{IRD7377}$$

'712:Real oil export, billion Rials

$$\text{IRXOIL} = \text{IRXOIL}(-1) + \text{B}(7122) * (\text{IRXOILB} - \text{IRXOILB}(-1)) + \text{B}(7123) * \text{IRD73} + \text{B}(7124) * \text{IRD83}$$

'713:Real export of goods, billion Rials

$$\text{IRXNOILG} = \text{IRXNOILG}(-1) + \text{B}(7131) * (\text{IRXGNODOP} - \text{IRXGNODOP}(-1))$$

'714:Real export of non factor services, billion Rials

$$\text{IRXNFS} = \text{IRXNFS}(-1) + \text{B}(7141) * (\text{IRXNFSDOP} - \text{IRXNFSDOP}(-1))$$

'715:Real input of production, billion Rials

$$\text{IRINPUT} = \text{IRINPUT}(-1) + \text{B}(7151) * (\text{IRGDPF} - \text{IRGDPF}(-1)) + \text{B}(7152) * \text{IRD79}$$

'716:Real changes in inventory, billion Rials

$$\text{IRII} = \text{B}(7160) + \text{B}(7161) * (\text{IRII}(-1) / \text{IROUTPUT}(-1)) * (\text{IROUTPUT} - \text{IROUTPUT}(-1)) + \text{B}(7162) * \text{IRII}(-1) + \text{B}(7163) * \text{IRYEAR} + \text{B}(7164) * \text{IRPGDPF} + \text{B}(7165) * \text{IRD8285}$$

### 'Nominal values

'801: Nominal aggregate demand, billion Rials

$$\text{IRADV} = \text{IRINPUTV} + \text{IRCV} + \text{IRGV} + \text{IRIV} + \text{IRDISV} + \text{IRXV}$$

'802: Nominal aggregate supply, billion Rials

$$\text{IRASV} = \text{IROUTPUTV} + \text{IRNITV} + \text{IRMV}$$

'803: Nominal aggregate output, billion Rials

$$\text{IROUTPUTV} = \text{IRINPUTV} + \text{IRGDPFV}$$

'804: Nominal aggregate input, billion Rials

$$IRINPUTV = IRPINPUT * IRINPUT$$

'805: Real gross national saving , billion Rials

$$IRGNSV = IRIV + IRIIV + IRBOTV + IRNFYV$$

'806: Real net national saving , billion Rials

$$IRNNSV = IRGNSV - IRCCAV$$

'807: Nominal export, billion Rials

$$IRXV = IRXOILV + IRXNOILGV + IRXNFSV$$

'808: Nominal import, billion Rials

$$IRMV = IRMGV + IRMNFSV$$

'809: Nominal balance of trade, billion Rials

$$IRBOTV = IRXV - IRMV$$

'810: Nominal gross domestic expenditure at market prices, billion Rials

$$IRGDEM V = IRCV + IRGV + IRIV + IRBOTV + IRDISV$$

'811: Nominal private saving, billion Rials

$$IRSPV = IRYDV - IRCV$$

'812: Nominal capital stock, billion Rials

$$IRKV = IRKV(-1) * (1 + (IRPI - IRPI(-1)) / IRPI(-1)) + IRIV - IRCCAV$$

'813: Nominal gross domestic income at market price, billion Rials

$$IRGDIMV = IRGDPMV$$

'814: Nominal gross national income at market price, billion Rials

$$IRGNIMV = IRGNPMV$$

'815: Nominal net national income at factor cost, billion Rials

$$IRNNIFV = IRGNIMV - IRCCAV - IRNITV$$

'816: Nominal non-oil gross domestic product at market price, billion Rials

$$IRGDPNFV = IRPGDPNF * IRGDPNF$$

'817: Nominal gross national products at market price, billion Rials

$$IRGNPMV = IRGDPMV + IRNFYV$$

'818: Nominal gross domestic products at market price, billion Rials

$$IRGDPMV = IRGDPNFV + IRVAOILV + IRNITV$$

'819: Nominal disposable income, billion Rials

$$IRYDV = IRGDPNFV + IRNFYV - IRCCAV - IRGRTDV$$

'820: Nominal capital consumption allowances, billion Rials

$$IRCCAV = IRCCA * IRPCCA$$

'821: Nominal investment, billion Rials

$$IRIV = IRIGV + IRIPV$$



'822:Nominal discrepancies, billion Rials

$$\text{IRDISV} = \text{IRGDPMV} - (\text{IRCV} + \text{IRGV} + \text{IRIV} + \text{IRBOTV})$$

'823:Nominal net indirect taxes, billion Rials

$$\text{IRNITV} = \text{IRITV} - \text{IRSUBV}$$

'824:Nominal net factor income, billion Rials

$$\text{IRNFYV} = \text{IRXFYV} - \text{IRMFYV}$$

'825:Gross domestic product at factor cost, billion Rials

$$\text{IRGDPFV} = \text{IRGDPNFV} + \text{IRVAOILV}$$

'901:Nominal government consumption, billion Rials

$$\text{IRGV} = \text{IRGV}(-1) + \text{B}(9011) * ((\text{IRGECV} + \text{IRGESV}) - (\text{IRGECV}(-1) - (\text{IRGESV}(-1))))$$

'902:Nominal government investment, billion Rials

$$\begin{aligned} \text{IRIGV} = & \text{IRIGV}(-1) + \text{B}(9021) * (\text{IRGEDV} - \text{IRGEDV}(-1)) + \text{B}(9022) * (\text{IRFEOAV} - \text{IRFEOAV}(-1)) \\ & + \text{B}(9023) * \text{IROLGV} + \text{B}(9024) * \text{IRD9497} \end{aligned}$$

'903:Nominal subsidies, billion Rials

$$\text{IRSUBV} = \text{IRSUBV}(-1) + \text{B}(9031) * (\text{IRGECV} + \text{IRGESV} - \text{IRGECV}(-1) - \text{IRGESV})$$

'904:Nominal private consumption, billion Rials

$$\text{IRCV} = \text{IRCV}(-1) + \text{B}(9041) * (\text{IRYDV} - \text{IRYDV}(-1)) + \text{B}(9042) * \text{IRSPV}(-1)$$

'905:Nominal value added of oil sector, billion Rials

$$\begin{aligned} \text{IRVAOILV} = & \text{IRVAOILV}(-1) + \text{B}(9051) * (\text{IRXOILD} / 1000 * \text{IREO} - \text{IRXOILD}(-1) / 1000 * \text{IREO}(-1)) \\ & + \text{B}(9052) * (\text{IRPDOIL} * (\text{IRYOILB} - \text{IRXOILB}) - \text{IRPDOIL}(-1) * (\text{IRYOILB}(-1) - \text{IRXOILB}(-1))) \end{aligned}$$

'906:Nominal import of goods, billion Rials

$$\text{IRMGV} = \text{IRMGV}(-1) + \text{B}(9061) * (\text{IRMGD} * \text{IREENOIL} - \text{IRMGD}(-1) * \text{IREENOIL}(-1))$$

'907:Nominal import of non-factor services, billion Rials

$$\text{IRMNFSV} = \text{IRMNFSV}(-1) + \text{B}(9071) * (\text{IRMNFSV} * \text{IREENOIL} - \text{IRMNFSV}(-1) * \text{IREENOIL}(-1))$$

'908:Nominal export of factor income from abroad, billion Rials

$$\text{IRXFYV} = \text{IRXFYV}(-1) + \text{B}(9081) * (\text{IRXFYSD} * \text{IREENOIL} - \text{IRXFYSD}(-1) * \text{IREENOIL}(-1))$$

'909:Nominal import of factor income from abroad, billion Rials

$$\begin{aligned} \text{IRMFYV} = & \text{IRMFYV}(-1) + \text{B}(9090) + \text{B}(9091) * (\text{IRMFYSD} * \text{IREENOIL} - \text{IRMFYSD}(-1) * \\ & \text{IREENOIL}(-1)) + \text{B}(9092) * \text{IRD93} + \text{B}(9093) * \text{IRD5992} \end{aligned}$$

'910:Nominal indirect taxes, billion Rials

$$\text{IRITV} = \text{IRITV}(-1) + \text{B}(9101) * (\text{IRGRTIV} - \text{IRGRTIV}(-1))$$

'911:Nominal private investment, billion Rials

$$\begin{aligned} \text{IRIPV} = & \text{IRIPV}(-1) + \text{IROLPV} + \text{B}(9111) * (\text{IRIRL} - \text{IRIRL}(-1)) + \text{B}(9112) * (\text{IRIRNB} - \text{IRIRNB}(-1)) \\ & + \text{B}(9113) * (\text{IROUTPUTV} - \text{IROUTPUTV}(-1)) + \text{B}(9114) * \text{IRD99} \end{aligned}$$

'912:Nominal oil export, billion Rials

$$\begin{aligned} \text{IRXOILV} = & \text{IRXOILV}(-1) + \text{B}(9121) * (\text{IRXOILD} * \text{IREO} - \text{IRXOILD}(-1) * \text{IREO}(-1)) \\ & + \text{B}(9122) * \text{IRD93} + \text{B}(9123) * \text{IRD9605} \end{aligned}$$

'913:Nominal non-oil goods export, billion Rials  
 $IRXNOILGV=B(9131)*(IRXGNOD*IREENOIL-IRXGNOD(-1)*IREENOIL(-1))$   
 $+IRXNOILGV(-1)$

'914:Nominal non-factor services export, billion Rials  
 $IRXNFSV=IRXNFSV(-1)+B(9141)*(IRXNFSD*IREENOIL-IRXNFSD(-1)*IREENOIL(-1))$

'915:Nominal changes in inventory, billion Rials  
 $IRIIV=IRIIV(-1)+B(9151)*(IRIIV(-1)/IRINPUTV(-1))*(IRINPUTV-IRINPUTV(-1))$   
 $+B(9152)*(IRIIV(-1)/IRGDPFV(-1))*(IRGDPFV-IRGDPFV(-1))$   
 $+B(9153)*IRD9596+B(9154)*IRD00$

### 'Price

'1001: Agregate price deflator  
 $IRPA = IRADV / IRAS$

'1002: Gross domestic product at factor cost price deflator  
 $IRPGDPF = IRGDPFV / IRGDPF$

'1003:Gross national saving price deflator  
 $IRPGNS = IRGNSV / IRGNS$

'1004:Net national saving price deflator  
 $IRPNNS = IRNNSV / IRNNS$

'1005:Import of goods price deflator  
 $IRPMG = IRMGV / IRMG$

'1006:Import of non factor services price deflator  
 $IRPMNFS = IRMNFSV / IRMNFS$

'1007:Export of oil price deflator  
 $IRPXOIL = IRXOILV / IRXOIL$

'1008:Export of non-oil goods price deflator  
 $IRPXNOILG = IRXNOILGV / IRXNOILG$

'1009:Export of non-factor services price deflator  
 $IRPXNFS = IRXNFSV / IRXNFS$

'1010: Balance of trade price deflator  
 $IRPBOT = IRBOTV / IRBOT$

'1011: Gross domestic expenditure at market prices price deflator  
 $IRPGDEM = IRGDEM V / IRGDEM$

'1012: Private saving price deflator  
 $IRPSP = IRSPV / IRSP$

'1013:Capital stock price deflator

$$\text{IRPK} = \text{IRKV} / \text{IRK}$$

'1014:Gross domestic product price deflator

$$\text{IRPGDPM} = \text{IRGDPMV} / \text{IRGDPM}$$

'1015:Private consumption price deflator

$$\text{IRPC} = \text{IRCV} / \text{IRC}$$

'1016:Government investment price deflator

$$\text{IRPIG} = \text{IRIGV} / \text{IRIG}$$

'1017:Private investment price deflator

$$\text{IRPIP} = \text{IRIPV} / \text{IRIP}$$

'1018:Government consumption price deflator

$$\text{IRPG} = \text{IRGV} / \text{IRG}$$

'1019:Net indirect taxes price deflator

$$\text{IRPNIT} = \text{IRNITV} / \text{IRNIT}$$

'1020:Import price deflator

$$\text{IRPM} = \text{IRMV} / \text{IRM}$$

'1021:Export price deflator

$$\text{IRPX} = \text{IRXV} / \text{IRX}$$

'1022:Net factor income from abroad price deflator

$$\text{IRPNFY} = \text{IRNFYV} / \text{IRNFY}$$

'1023:Export of factor income from abroad price deflator

$$\text{IRPXFY} = \text{IRXFYV} / \text{IRXFY}$$

'1024:Import of factor income from abroad price deflator

$$\text{IRPMFY} = \text{IRMFYV} / \text{IRMFY}$$

'1025:Oil value added price deflator

$$\text{IRPVAOIL} = \text{IRVAOILV} / \text{IRVAOIL}$$

'1026:Investment price deflator

$$\text{IRPI} = \text{IRIV} / \text{IRI}$$

'1027:Inflation rate for consumer price index

$$\text{IRINFCPI} = (\text{IRCPI} - \text{IRCPI}(-1)) / \text{IRCPI}(-1)$$

'1028:Inflation rate for whole sale price index

$$\text{IRINFWPI} = (\text{IRWPI} - \text{IRWPI}(-1)) / \text{IRWPI}(-1)$$

'1029:Gross national product price deflator

$$\text{IRPGNPM} = \text{IRGNPMV} / \text{IRGNPM}$$

'1030:Discrepancies price deflator

$$\text{IRPDIS} = \text{IRDISV} / \text{IRDIS}$$

'1031:Gross domestic income price deflator  
IRPGDIM = IRGDIMV / IRGDIM

'1032:Gross national income price deflator  
IRPGNIM = IRGNIMV / IRGNIM

'1033:Disposable income price deflator  
IRPYD = IRYDV / IRYD

'1034:Net national income price deflator  
IRPNNIF = IRNNIFV / IRNNIF

'1035:Non-oil gross domestic product price deflator  
IRPGDPNF = (IRCV + IRGV + IRIV + IRXV - IRMV + IRDISV - IRVAOILV -  
IRNITV) / IRGDPNF

'1036: Indirect taxes price deflator  
IRPIT=IRPGDPF

'1037: Subsidies price deflator  
IRPSUB = IRPGDPF

'1038: Output price deflator  
IRPOUTPUT=IROUTPUTV/IROUTPUT

'1039: Changes in inventory price deflator  
IRPII=IRIIV/IRII

'2001:Market exchange rate, Rials/Dollar  
IREM =IREM(-1)+B(20011)\*(IRM2V-IRM2V(-  
1))+B(20012)\*IRBOPD+B(20013)\*IRGRDSV+B(20014)\*IRD99

'2002:Effective exchange rate for non-oil goods and services, Rials/Dollar  
IREENOIL= IREO\*IRD5978+ (1-IRD5978)\*(B(20020)+B(20021)\*IREM+(1-  
B(20021))\*IREO)+B(20022)\*IREENOIL(-1)+B(20023)\*IRD9305

'2003:Whole sale price index for imported goods  
IRWPIM = IRWPIM(-1)+ B(20031)\* ( ((IRMGD/(IRMGD+IRMNFSD))\*IRPM) - ((IRMGD(-  
1)/(IRMGD(-1)+IRMNFSD(-1)))\*IRPM(-1)))

'2004:Whole sale price index for exported goods  
IRWPIX =IRWPIX(-1)+B(20041)\*(((IRXGNOD/(IRXGD+IRXNFSD))\*IRPX) -  
((IRXGNOD(-1)/(IRXGD(-1)+IRXNFSD(-1)))\*IRPX(-1)))

'2005:Whole sale price index for domestically produced and consumed goods  
IRWPID = IRWPID(-1)+B(20051)\*(IRPGDPNF-IRPGDPNF(-1))

'2006:Whole sale price index  
IRWPI =B(20061)\*IRWPID+B(20062)\*IRWPIM+(1-B(20061)-B(20062))\*IRWPIX

'2007:Consumer price index  
IRCPI= IRCPI(-1)+B(20071)\*(IRPGDPNF-IRPGDPNF(-1))+B(20072)\*IRD00

'2008:Non-organized market interest rate

$$\text{IRIRNB} = \text{B}(20080) + \text{B}(20081) * \text{IRIRNB}(-1) + \text{B}(20082) * (\text{IRSPV} - \text{IRSPV}(-1)) + (\text{IRCPI} - \text{IRCPI}(-1)) / \text{IRCPI}(-1) + \text{B}(20083) * \text{IRD7905} + \text{B}(20084) * \text{IRD9699}$$

'2009:Capital consumption allowances price deflator

$$\text{IRPCCA} = \text{IRPCCA}(-1) + \text{B}(20091) * (\text{IRPK} - \text{IRPK}(-1))$$

'2010: Input price deflator

$$\text{IRPINPUT} = \text{IRPINPUT}(-1) + \text{B}(20101) * (\text{IRPGDPF} - \text{IRPGDPF}(-1))$$

### 'Labor market

'3001:Wage index

$$\text{IRWIND} = \text{IRWINDPGDPM} * \text{IRPGDPM}$$

'3002:Active population, thousand persons

$$\text{IRPOPA} = \text{IRPOPAPOP} * \text{IRPOP}$$

'3003:Unemployment, thousand persons

$$\text{IRUNEMP} = \text{IRPOPA} - \text{IREMP}$$

'3004:Unemployment rate, percent

$$\text{IRUNEMPR} = \text{IRUNEMP} / \text{IRPOPA} * 100$$

'3101:Active population ratio

$$\text{IRPOPAPOP} = \text{B}(31010) + \text{B}(31011) * \text{IRPOPAPOP}(-1) + \text{B}(31012) * \text{IRYEAR} + \text{B}(31013) * \text{IRD66}$$

'3102:Population, thousand persons

$$\text{IRPOP} = \text{B}(31020) + \text{B}(31021) * \text{IRPOP}(-1)$$

'3103:Real wage index

$$\text{IRWINDPGDPM} = \text{IRWINDPGDPM}(-1) + \text{B}(31031) * (\text{IREMP} - \text{IREMP}(-1)) + \text{B}(31032) * (\text{IRGDPM} - \text{IRGDPM}(-1)) + \text{B}(31033) * \text{IRD7579} + \text{B}(31034) * \text{IRD7880}$$

'3104:Employment, thousand persons

$$\text{IREMP} = \text{IREMP}(-1) + \text{B}(31041) * (\text{IRWIND} - \text{IRWIND}(-1)) + \text{B}(31042) * \text{IRPOPA} + \text{B}(31043) * \text{IRD66} + \text{B}(31044) * \text{IRD76}$$

## Block Structure of the Model

Number of equations: 200

Number of independent blocks: 3

Number of simultaneous blocks: 1

Number of recursive blocks: 2

### *Block 1: 14 Recursive Equations*

irxoilb(24)	irxoild(23)	irvaoilv(133)	irkadc(16)
irgefide(57)	irxfysd(30)	irigv(130)	irpop(198)
irpopapop(197)	irpopa(194)	irvaoil(94)	irxoilv(140)
irxoil(99)	ircca(95)		

### *Block 2: 102 Simultaneous Equations*

irtbd(1)	irsbd(2)	ircad(3)	irbopd(4)
irxgd(5)	irxnfsd(6)	irmnfsd(7)	irxgnod(8)
irmgd(9)	irxsd(10)	irmsd(11)	irfysbd(12)
irnfsbd(13)	irbopeod(15)	irtbdc(18)	irntrd(20)
irfysbdc(21)	irnfsbdc(22)	irxnfsdop(25)	irmnfsdcifp(26)
irmgdCIFP(27)	irxgnodop(28)	irmfysd(29)	irbopeodc(31)
irntrdc(32)	irddv(39)	irsdv(40)	ircuv(41)
irm2v(42)	irddvpgdpm(48)	irsdvpgdpm(49)	ircuvpgdpm(50)
irgesv(56)	irgrtv(58)	irgrsv(61)	irgrtdv(62)
irx(68)	irm(69)	irnit(80)	irk(81)
irgdpm(82)	iri(84)	irit(85)	irsub(86)
irgdPF(87)	irig(88)	irgdPNF(90)	irmg(91)
irmnfs(92)	irip(93)	irxnoilg(100)	irxnfs(101)
irinput(102)	iroutputv(106)	irinputv(107)	irxv(110)
irmv(111)	irbotv(112)	irspv(114)	irkv(115)
irgdPNFV(119)	irgdpmv(121)	irydv(122)	irccav(123)
iriv(124)	irdisv(125)	irnitv(126)	irnfyv(127)
irgdPFV(128)	irgv(129)	irsubv(131)	ircv(132)
irmgv(134)	irmnfsv(135)	irxfyv(136)	irmfyv(137)
iritv(138)	iripv(139)	irxnoilgv(141)	irxnfsv(142)
irpgdPF(145)	irpk(156)	irpgdpm(157)	irpm(163)
irpx(164)	irpi(169)	irpgdPNF(178)	irpit(179)
irpsub(180)	irem(183)	ireenoil(184)	irwpim(185)
irwpix(186)	irwpid(187)	irwpi(188)	ircpi(189)
irirnb(190)	irpcca(191)	irpinpvt(192)	irwind(193)
irwindpgdpm(199)	iremp(200)		

### *Block 3: 84 Recursive Equations*

irbopdc(14)	ircadc(17)	irsbd(19)	irm2ngsv(35)
irm2ngsvpgdpm(46)	irgev(54)	irgrmv(60)	irgroilv(59)
irgrtv(53)	irgrv(52)	irgbdv(55)	irgbdvc(51)
irolv(38)	irolvc(37)	irm2nggv(34)	irm2ngv(33)
irm2npvpgdpm(45)	irm2npv(36)	irm2nfad(47)	irm2nfav(43)
irm2nww(44)	irmfy(98)	irxfy(97)	irnfy(79)
iryd(83)	irc(96)	irg(89)	irbot(70)

irdis(75)	irtot(73)	irad(63)	iroutput(65)
iras(64)	irii(103)	irgns(66)	irnns(67)
irgdem(71)	irsp(72)	irgdim(74)	irgnpm(76)
irgnim(77)	irnnif(78)	iradv(104)	irasv(105)
irriv(143)	irgnsv(108)	irnnsv(109)	irgdemv(113)
irgdimv(116)	irgnpmv(120)	irgnimv(117)	irnnifv(118)
irpa(144)	irpgns(146)	irpnns(147)	irpmg(148)
irpmnfs(149)	irpxoil(150)	irpxnoilg(151)	irpxnfs(152)
irpbot(153)	irpgdem(154)	irpsp(155)	irpc(158)
irpig(159)	irpip(160)	irpg(161)	irpnit(162)
irpnfy(165)	irpxfy(166)	irpmfy(167)	irpvaoil(168)
irinfcpi(170)	irinfwpi(171)	irpgnpm(172)	irpdis(173)
irpgdim(174)	irpgnim(175)	irpyd(176)	irpnnif(177)
irpoutput(181)	irpii(182)	irunemp(195)	irunempr(196)

## Estimation

System: VER5\_SYS\_200\_EQ  
 Estimation Method: Iterative Least Squares  
 Date: 01/27/04 Time: 16:26  
 Sample: 1959 2001  
 Included observations: 43  
 Total system (unbalanced) observations 2734  
 Convergence achieved after 2 iterations

	Coefficient	Std. Error	t-Statistic	Prob.
B(1011)	0.942165	0.029104	32.37264	0.0000
B(1021)	0.000431	0.000125	3.454862	0.0006
B(1022)	5.05E-05	2.03E-05	2.481207	0.0132
B(1023)	-15.64872	1.298578	-12.05066	0.0000
B(1030)	-3.019909	0.671241	-4.498991	0.0000
B(1031)	-0.002908	0.001466	-1.983484	0.0474
B(1032)	0.000337	4.43E-05	7.602444	0.0000
B(1033)	17.42417	2.696274	6.462315	0.0000
B(1034)	18.41738	3.888559	4.736300	0.0000
B(1040)	12.19522	10.53315	1.157794	0.2471
B(1041)	0.007111	0.000809	8.790457	0.0000
B(1042)	-0.017707	0.002859	-6.192753	0.0000
B(1043)	0.000461	0.000120	3.835019	0.0001
B(1044)	-0.780628	0.135937	-5.742557	0.0000
B(1045)	0.005406	0.001225	4.412355	0.0000
B(1046)	-82.75939	20.97036	-3.946493	0.0001
B(1050)	-4.428000	1.529689	-2.894706	0.0038
B(1051)	0.002121	0.000485	4.370071	0.0000
B(1052)	0.711260	0.083329	8.535567	0.0000
B(1053)	2.15E-05	1.15E-05	1.874661	0.0610
B(1060)	1817.934	222.3009	8.177806	0.0000
B(1061)	2.687007	0.592817	4.532607	0.0000
B(1062)	-2.302537	0.601050	-3.830855	0.0001
B(1063)	0.195155	0.074139	2.632299	0.0085
B(1064)	0.265164	0.027786	9.542963	0.0000
B(1065)	-1900.653	240.1403	-7.914760	0.0000
B(1070)	94.57296	71.87326	1.315830	0.1883
B(1071)	0.249211	0.036141	6.895545	0.0000
B(1072)	-1634.034	221.9668	-7.361612	0.0000
B(1073)	0.523004	0.075894	6.891208	0.0000
B(1080)	-2234.541	820.5993	-2.723059	0.0065
B(1081)	-0.203765	0.059561	-3.421128	0.0006
B(1082)	-0.234788	0.035886	-6.542602	0.0000
B(1083)	-0.455877	0.158180	-2.882013	0.0040
B(1084)	0.098394	0.065697	1.497703	0.1343
B(1085)	-0.963193	0.108803	-8.852669	0.0000
B(1086)	-4305.550	835.2075	-5.155066	0.0000
B(1090)	4378.888	203.0327	21.56740	0.0000
B(1091)	-0.085773	0.020499	-4.184302	0.0000
B(1092)	-0.023206	0.014718	-1.576683	0.1150
B(1093)	0.575998	0.076136	7.565355	0.0000
B(1094)	-0.272573	0.047615	-5.724460	0.0000



B(1095)	-0.070255	0.037058	-1.895804	0.0581
B(1096)	-0.996882	0.007537	-132.2673	0.0000
B(3011)	197.3411	94.85563	2.080437	0.0376
B(3012)	16754.21	4859.811	3.447503	0.0006
B(3020)	-7369.845	1940.040	-3.798812	0.0001
B(3021)	0.965909	0.026028	37.11006	0.0000
B(3022)	754.4355	211.3807	3.569084	0.0004
B(3023)	-16101.08	2505.765	-6.425614	0.0000
B(3024)	0.192474	0.038822	4.957819	0.0000
B(3031)	0.612077	0.064736	9.454922	0.0000
B(3032)	0.427496	0.063300	6.753540	0.0000
B(3033)	4192.961	759.7586	5.518807	0.0000
B(3034)	-3056.327	690.8732	-4.423861	0.0000
B(3041)	0.053912	0.013975	3.857712	0.0001
B(3042)	0.766479	0.053990	14.19679	0.0000
B(3043)	-1211.950	317.3436	-3.819045	0.0001
B(3044)	165.8924	48.87413	3.394278	0.0007
B(3050)	5192.526	2667.105	1.946877	0.0517
B(3051)	0.132827	0.025699	5.168455	0.0000
B(3052)	-2458.733	698.8318	-3.518347	0.0004
B(3053)	0.748266	0.055552	13.46955	0.0000
B(3060)	24845.30	4789.545	5.187402	0.0000
B(3061)	0.511482	0.111157	4.601458	0.0000
B(3062)	0.065243	0.015931	4.095249	0.0000
B(3063)	-12237.21	2684.212	-4.558960	0.0000
B(3064)	-1387.777	349.7534	-3.967872	0.0001
B(3065)	-271.9007	78.34315	-3.470637	0.0005
B(3066)	-5762.145	2943.094	-1.957853	0.0504
B(5011)	0.064117	0.022560	2.842011	0.0045
B(5012)	0.011359	0.003413	3.328493	0.0009
B(5021)	0.673967	0.045720	14.74110	0.0000
B(5022)	0.090668	0.015177	5.973813	0.0000
B(5023)	0.857376	0.118221	7.252325	0.0000
B(5024)	-8272.686	1351.909	-6.119260	0.0000
B(5025)	7499.000	1103.233	6.797294	0.0000
B(5031)	0.031195	0.004222	7.388974	0.0000
B(5032)	-15991.31	1426.931	-11.20678	0.0000
B(5040)	0.024183	0.002087	11.58641	0.0000
B(5051)	0.021921	0.001016	21.57150	0.0000
B(7011)	64.97023	10.33121	6.288737	0.0000
B(7012)	18388.42	2723.745	6.751154	0.0000
B(7013)	-16350.31	3088.487	-5.293955	0.0000
B(7014)	26806.71	3312.640	8.092250	0.0000
B(7015)	-21156.10	2807.333	-7.536013	0.0000
B(7021)	47.90632	5.044875	9.496037	0.0000
B(7030)	-51232.35	7332.028	-6.987473	0.0000
B(7031)	0.050174	0.008210	6.111230	0.0000
B(7032)	0.995634	0.086554	11.50305	0.0000
B(7033)	11.08226	1.104127	10.03712	0.0000
B(7034)	0.185611	0.150127	1.236361	0.2164
B(7035)	26228.64	6296.743	4.165430	0.0000
B(7041)	390.7946	18.67093	20.93065	0.0000
B(7051)	401.9237	11.04049	36.40453	0.0000

B(7052)	0.987127	0.010981	89.89367	0.0000
B(7060)	12098.38	2654.050	4.558460	0.0000
B(7061)	0.205725	0.020168	10.20082	0.0000
B(7062)	1.743619	0.115789	15.05861	0.0000
B(7063)	-2306.733	415.5281	-5.551327	0.0000
B(7064)	-20219.42	3910.080	-5.171100	0.0000
B(7071)	0.995618	0.003170	314.1062	0.0000
B(7072)	40.91853	0.738768	55.38755	0.0000
B(7073)	7.844505	3.735200	2.100157	0.0358
B(7080)	5476.560	289.8960	18.89147	0.0000
B(7081)	0.035113	0.000396	88.61754	0.0000
B(7082)	0.022363	0.007650	2.923345	0.0035
B(7083)	5716.411	1148.709	4.976377	0.0000
B(7091)	0.320360	0.073631	4.350864	0.0000
B(7092)	0.080125	0.027678	2.894883	0.0038
B(7101)	243.6374	18.35190	13.27587	0.0000
B(7102)	-5057.099	767.0190	-6.593186	0.0000
B(7110)	-369.2890	215.7747	-1.711457	0.0871
B(7111)	163.9524	9.103886	18.00905	0.0000
B(7112)	3154.101	626.1722	5.037114	0.0000
B(7122)	39.44911	1.177497	33.50252	0.0000
B(7123)	-5922.489	1443.047	-4.104156	0.0000
B(7124)	4820.157	1420.300	3.393760	0.0007
B(7131)	515.4733	61.25883	8.414679	0.0000
B(7141)	159.5694	22.25699	7.169408	0.0000
B(7151)	0.492872	0.067513	7.300410	0.0000
B(7152)	-37450.59	6382.253	-5.867926	0.0000
B(7160)	-862614.1	266840.5	-3.232695	0.0012
B(7161)	2.205404	1.383951	1.593556	0.1112
B(7162)	0.267325	0.142146	1.880635	0.0601
B(7163)	642.8802	197.5873	3.253651	0.0012
B(7164)	-9355.796	4214.952	-2.219668	0.0265
B(7165)	-19100.66	5222.203	-3.657588	0.0003
B(9011)	0.351528	0.022972	15.30279	0.0000
B(9021)	1.042572	0.144297	7.225186	0.0000
B(9022)	0.638861	0.187569	3.406000	0.0007
B(9023)	0.534659	0.157815	3.387875	0.0007
B(9024)	-8986.143	2069.876	-4.341392	0.0000
B(9031)	0.088122	0.008386	10.50802	0.0000
B(9041)	0.501282	0.041874	11.97128	0.0000
B(9042)	0.219113	0.039717	5.516843	0.0000
B(9051)	1.316292	0.132178	9.958510	0.0000
B(9052)	0.465473	0.094420	4.929833	0.0000
B(9061)	0.001096	3.78E-05	29.02307	0.0000
B(9071)	0.001068	2.46E-05	43.49471	0.0000
B(9081)	0.000600	5.29E-05	11.34933	0.0000
B(9090)	-421.5744	53.22012	-7.921334	0.0000
B(9091)	0.000524	3.17E-05	16.53281	0.0000
B(9092)	2548.013	132.0376	19.29763	0.0000
B(9093)	410.0078	56.66091	7.236167	0.0000
B(9101)	0.937287	0.092533	10.12925	0.0000
B(9111)	-784.5956	356.6107	-2.200146	0.0279
B(9112)	-224.9861	78.06766	-2.881938	0.0040



S.E. of regression	37.13913	Sum squared resid	56551.90
Durbin-Watson stat	2.093442		

$$\text{Equation: IRXNFSDOP} = \text{IRXNFSDOP}(-1) + \text{B}(1021) * \text{IREENOIL} + \text{B}(1022) * (\text{IRGDPNF} - \text{IRGDPNF}(-1)) + \text{B}(1023) * \text{IRD79}$$

Observations: 42

R-squared	0.932356	Mean dependent var	3.822046
Adjusted R-squared	0.928887	S.D. dependent var	4.866034
S.E. of regression	1.297623	Sum squared resid	65.66917
Durbin-Watson stat	1.906516		

$$\text{Equation: IRMNFSDCIFP} = \text{IRMNFSDCIFP}(-1) + \text{B}(1030) + \text{B}(1031) * (\text{IREENOIL} * \text{IRCIFP} / \text{IRWPI} - \text{IREENOIL}(-1) * \text{IRCIFP}(-1) / \text{IRWPI}(-1)) + \text{B}(1032) * (\text{IRGDPM} - \text{IRGDPM}(-1)) + \text{B}(1033) * (\text{IRD77} + \text{IRD79}) + \text{B}(1034) * \text{IRD88}$$

Observations: 42

R-squared	0.905942	Mean dependent var	12.39704
Adjusted R-squared	0.895774	S.D. dependent var	10.97627
S.E. of regression	3.543582	Sum squared resid	464.6081
Durbin-Watson stat	1.362491		

$$\text{Equation: IRMGDCIFP} = \text{B}(1040) + \text{B}(1041) * (\text{IRXGD} + \text{IRXSD}) + \text{B}(1042) * \text{IREENOIL} + \text{B}(1043) * \text{IRGDPM} + \text{B}(1044) * \text{IRCIFP} + \text{B}(1045) * \text{IRKAD} + \text{B}(1046) * \text{IRD79}$$

Observations: 43

R-squared	0.938607	Mean dependent var	119.6094
Adjusted R-squared	0.928375	S.D. dependent var	69.94471
S.E. of regression	18.71916	Sum squared resid	12614.65
Durbin-Watson stat	1.467555		

$$\text{Equation: IRXGNODOP} = \text{B}(1050) + \text{B}(1051) * \text{IREX} * \text{OECDP} / \text{IRWPI} + \text{B}(1052) * \text{IRXGNODOP}(-1) + \text{B}(1053) * \text{IRGDPNF}$$

Observations: 42

R-squared	0.921506	Mean dependent var	15.50504
Adjusted R-squared	0.915309	S.D. dependent var	12.55562
S.E. of regression	3.653906	Sum squared resid	507.3390
Durbin-Watson stat	1.990607		

$$\text{Equation: IRMFYSD} = \text{B}(1060) + \text{B}(1061) + \text{B}(1062) * (1 - \text{IRD5977}) * \text{IRKADC} * \text{LIBOR} / 100 + \text{B}(1063) * \text{IRMFYSD}(-1) + \text{B}(1064) * \text{IRD5978} * \text{IRMGD} + \text{B}(1065) * \text{IRD5977}$$

Observations: 42

R-squared	0.903588	Mean dependent var	1471.915
Adjusted R-squared	0.890198	S.D. dependent var	1154.321
S.E. of regression	382.5010	Sum squared resid	5267054.
Durbin-Watson stat	1.749973		

$$\text{Equation: IRXFYSD} = \text{B}(1070) + \text{B}(1071) * \text{IRGEFIDC} + \text{B}(1072) * (1 - \text{IRD5978}) + \text{B}(1073) * \text{IRXFYSD}(-1)$$

Observations: 42

R-squared	0.914190	Mean dependent var	884.2424
Adjusted R-squared	0.907416	S.D. dependent var	898.4828
S.E. of regression	273.3871	Sum squared resid	2840139.
Durbin-Watson stat	2.226793		

$$\text{Equation: IRBOPEODC} = (\text{B}(1080) + \text{B}(1081) * \text{IRKADC} + \text{B}(1082) * \text{IRTBDC} + \text{B}(1083) * \text{IRFYSDC} + \text{B}(1084) * \text{IRNFSBDC}) * (1 + \text{B}(1085) * \text{IRD5970})$$

+B(1086)*IRD84			
Observations: 43			
R-squared	0.968023	Mean dependent var	-5161.477
Adjusted R-squared	0.962694	S.D. dependent var	4035.956
S.E. of regression	779.5398	Sum squared resid	21876561
Durbin-Watson stat	1.926413		
Equation: IRNTRDC =IRNTRDC(-1)+(B(1090)+B(1091)*IRKADC +B(1092)*IRTBDC+B(1093)*IRFYBDC+B(1094)*IRNFSBDC +B(1095)*IRBOPEODC)*(1+B(1096)*IRD5988)			
Observations: 42			
R-squared	0.999544	Mean dependent var	3385.786
Adjusted R-squared	0.999466	S.D. dependent var	5316.719
S.E. of regression	122.8542	Sum squared resid	528260.5
Durbin-Watson stat	2.982658		
Equation: IRM2NPVPGDPM=IRM2NPVPGDPM(-1)+B(3011)*IRIRL +B(3012)*IRD7576			
Observations: 42			
R-squared	0.951678	Mean dependent var	61206.93
Adjusted R-squared	0.950470	S.D. dependent var	30149.64
S.E. of regression	6709.927	Sum squared resid	1.80E+09
Durbin-Watson stat	1.316340		
Equation: IRM2NGSVPGDPM = B(3020)+B(3021)*IRM2NGSVPGDPM(-1)+ B(3022)* IRIRL+B(3023)*IRD9497+B(3024)*IRD5978*IRM2NGSVPGDPM(-1)			
Observations: 42			
R-squared	0.979279	Mean dependent var	-41428.65
Adjusted R-squared	0.977039	S.D. dependent var	25497.33
S.E. of regression	3863.585	Sum squared resid	5.52E+08
Durbin-Watson stat	2.432540		
Equation: IRM2NFAD = B(3031)*IRBOPDC+B(3032)*IRM2NFAD(-1) +B(3033)*IRD8589+B(3034)*IRD9705			
Observations: 42			
R-squared	0.908281	Mean dependent var	4683.154
Adjusted R-squared	0.901040	S.D. dependent var	4380.937
S.E. of regression	1378.154	Sum squared resid	72173706
Durbin-Watson stat	2.258487		
Equation: IRDDVPGDPM = B(3041)*IRGDPM+B(3042) *IRDDVPGDPM(-1)+B(3043)*IRIRS+B(3044)*IRIRNB			
Observations: 42			
R-squared	0.985104	Mean dependent var	27209.00
Adjusted R-squared	0.983928	S.D. dependent var	17099.12
S.E. of regression	2167.733	Sum squared resid	1.79E+08
Durbin-Watson stat	1.879504		
Equation: IRSDVPGDPM = B(3050)+B(3051)*IRGDPM+B(3052)*IRIRS +B(3053)*IRSDVPGDPM(-1)			
Observations: 42			
R-squared	0.978829	Mean dependent var	47919.53
Adjusted R-squared	0.977157	S.D. dependent var	26634.49
S.E. of regression	4025.477	Sum squared resid	6.16E+08
Durbin-Watson stat	1.543627		

$$\text{Equation: IRCUVPGDPM} = B(3060)+B(3061)*\text{IRCUVPGDPM}(-1) \\ +B(3062)*\text{IRGDPM}+B(3063)*\text{IRD5977}+B(3064)*\text{IRIRL}+B(3065) \\ * \text{IRIRNB}+B(3066)*\text{IRD79}$$

Observations: 42

R-squared	0.950511	Mean dependent var	17188.82
Adjusted R-squared	0.942027	S.D. dependent var	11169.71
S.E. of regression	2689.404	Sum squared resid	2.53E+08
Durbin-Watson stat	1.545056		

$$\text{Equation: IRGRTIV} = \text{IRGRTIV}(-1)+B(5011)*(\text{IRMGV}-\text{IRMGV}(-1)) \\ +B(5012)*(\text{IROUTPUTV}-\text{IROUTPUTV}(-1)-(\text{IRMGV}-\text{IRMGV}(-1)))$$

Observations: 42

R-squared	0.984474	Mean dependent var	1623.812
Adjusted R-squared	0.984086	S.D. dependent var	3506.546
S.E. of regression	442.3578	Sum squared resid	7827216.
Durbin-Watson stat	2.652417		

$$\text{Equation: IRGROILV} = B(5021)*(1-\text{IRD93})*\text{IREO}*(\text{IRXOILD}/1000 \\ -\text{IRGRDSV}/\text{IREM})+B(5022)*\text{IRPDOIL}*(\text{IRYOILB}-\text{IRXOILB})+B(5023) \\ * \text{IRD93}*(0.58*1000+0.42*(\text{IREO}-1000))*(\text{IRXOILD}/1000-\text{IRGRDSV} \\ / \text{IREM}) +B(5024)*\text{IRD0005}+B(5025)*\text{IRD9597}$$

Observations: 43

R-squared	0.986434	Mean dependent var	5223.409
Adjusted R-squared	0.985006	S.D. dependent var	9429.042
S.E. of regression	1154.603	Sum squared resid	50658132
Durbin-Watson stat	2.297381		

$$\text{Equation: IRGRMV} = \text{IRGRMV}(-1)+B(5031)*(\text{IROUTPUTV}-\text{IROUTPUTV}(-1))+ \\ B(5032)*\text{IRD00}$$

Observations: 42

R-squared	0.941705	Mean dependent var	2084.902
Adjusted R-squared	0.940247	S.D. dependent var	4662.247
S.E. of regression	1139.655	Sum squared resid	51952555
Durbin-Watson stat	1.173772		

$$\text{Equation: IRGRSV} = \text{IRGRSV}(-1)+B(5040)*(\text{IROUTPUTV}-\text{IROUTPUTV}(-1))$$

Observations: 42

R-squared	0.977353	Mean dependent var	1981.923
Adjusted R-squared	0.977353	S.D. dependent var	4687.691
S.E. of regression	705.4403	Sum squared resid	20403489
Durbin-Watson stat	1.543708		

$$\text{Equation: IRGRTDV} = \text{IRGRTDV}(-1)+B(5051)*(\text{IROUTPUTV}-\text{IROUTPUTV}(-1))$$

Observations: 42

R-squared	0.996288	Mean dependent var	2718.562
Adjusted R-squared	0.996288	S.D. dependent var	5637.054
S.E. of regression	343.4649	Sum squared resid	4836693.
Durbin-Watson stat	2.119033		

$$\text{Equation: IRIG} = \text{IRIG}(-1)+B(7011)*(\text{IRGEDV}/\text{IRWPI}-\text{IRGEDV}(-1)/\text{IRWPI}(-1)) \\ +B(7012)*\text{IRD76}+B(7013)*\text{IRD77}+B(7014)*\text{IRD78}+B(7015)*\text{IRD79}$$

Observations: 42

R-squared	0.957351	Mean dependent var	21322.04
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Adjusted R-squared	0.952740	S.D. dependent var	12528.64
S.E. of regression	2723.652	Sum squared resid	2.74E+08
Durbin-Watson stat	2.005259		

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Equation:  $IRG = IRG(-1) + B(7021) * ((IRGECV + IRGESV) / IRWPI - (IRGECV(-1) + IRGESV(-1)) / IRWPI(-1))$

Observations: 42

R-squared	0.981277	Mean dependent var	31529.90
Adjusted R-squared	0.981277	S.D. dependent var	16294.82
S.E. of regression	2229.650	Sum squared resid	2.04E+08
Durbin-Watson stat	1.763736		

---

Equation:  $IRGDPNF = B(7030) + B(7031) * IRK(-1) + B(7032) * (IRIP + IRIG - IRM * IRMACHIMV) + B(7033) * IREMP + B(7034) * IRM * IRMACHIMV + B(7035) * IRD79$

Observations: 42

R-squared	0.994438	Mean dependent var	146771.4
Adjusted R-squared	0.993665	S.D. dependent var	77008.03
S.E. of regression	6129.205	Sum squared resid	1.35E+09
Durbin-Watson stat	1.091577		

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Equation:  $IRMG = IRMG(-1) + B(7041) * (IRMGDCIFP - IRMGDCIFP(-1))$

Observations: 42

R-squared	0.979394	Mean dependent var	46515.79
Adjusted R-squared	0.979394	S.D. dependent var	28359.67
S.E. of regression	4070.998	Sum squared resid	6.79E+08
Durbin-Watson stat	1.945070		

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Equation:  $IRMNFS = B(7051) * (IRMNFSDCIFP - IRMNFSDCIFP(-1)) + B(7052) * IRMNFS(-1)$

Observations: 42

R-squared	0.989562	Mean dependent var	4786.395
Adjusted R-squared	0.989301	S.D. dependent var	4300.820
S.E. of regression	444.8678	Sum squared resid	7916294.
Durbin-Watson stat	1.540307		

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Equation:  $IRIP = B(7060) + B(7061) * IRGDPNF(-1) + B(7062) * IRM * IRMACHIMV + B(7063) * IRIRL + B(7064) * IRD779$

Observations: 42

R-squared	0.928775	Mean dependent var	39600.67
Adjusted R-squared	0.921075	S.D. dependent var	20314.37
S.E. of regression	5707.032	Sum squared resid	1.21E+09
Durbin-Watson stat	1.066552		

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Equation:  $IRVAOIL = B(7071) * IRVAOIL(-1) + B(7072) * (IRXOILB - IRXOILB(-1)) + B(7073) * ((IRYOILB - IRXOILB) - (IRYOILB(-1) - IRXOILB(-1)))$

Observations: 42

R-squared	0.997807	Mean dependent var	41436.89
Adjusted R-squared	0.997695	S.D. dependent var	18726.49
S.E. of regression	899.0943	Sum squared resid	31526453
Durbin-Watson stat	2.355284		

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Equation:  $IRCCA = B(7080) + B(7081) * IRK(-1) + B(7082) * (IRWARCD + IRWARDED + IRWARMD) + B(7083) * IRD01$

Observations: 42

R-squared	0.995927	Mean dependent var	27823.87
Adjusted R-squared	0.995605	S.D. dependent var	16462.35
S.E. of regression	1091.339	Sum squared resid	45258780
Durbin-Watson stat	0.653762		

$$\text{Equation: IRC} = B(7091) * (\text{IRYD} - \text{IRYD}(-1)) + B(7092) * \text{IRSP}(-1) + \text{IRC}(-1)$$

Observations: 42

R-squared	0.989693	Mean dependent var	89077.96
Adjusted R-squared	0.989435	S.D. dependent var	44696.43
S.E. of regression	4594.167	Sum squared resid	8.44E+08
Durbin-Watson stat	2.064164		

$$\text{Equation: IRXFY} = \text{IRXFY}(-1) + B(7101) * (\text{IRXFYSD} / \text{OECDP} - \text{IRXFYSD}(-1) / \text{OECDP}(-1)) + B(7102) * \text{IRD7879}$$

Observations: 42

R-squared	0.961302	Mean dependent var	4205.160
Adjusted R-squared	0.960335	S.D. dependent var	5444.178
S.E. of regression	1084.271	Sum squared resid	47025705
Durbin-Watson stat	2.158422		

$$\text{Equation: IRMFY} = \text{IRMFY}(-1) + B(7110) + B(7111) * (\text{IRMFYSD} / \text{OECDP} - \text{IRMFYSD}(-1) / \text{OECDP}(-1)) + B(7112) * \text{IRD7377}$$

Observations: 42

R-squared	0.935498	Mean dependent var	4410.043
Adjusted R-squared	0.932191	S.D. dependent var	5040.250
S.E. of regression	1312.492	Sum squared resid	67182817
Durbin-Watson stat	1.664805		

$$\text{Equation: IRXOIL} = \text{IRXOIL}(-1) + B(7122) * (\text{IRXOILB} - \text{IRXOILB}(-1)) + B(7123) * \text{IRD73} + B(7124) * \text{IRD83}$$

Observations: 42

R-squared	0.994628	Mean dependent var	38999.14
Adjusted R-squared	0.994353	S.D. dependent var	18898.73
S.E. of regression	1420.224	Sum squared resid	78664375
Durbin-Watson stat	1.611251		

$$\text{Equation: IRXNOILG} = \text{IRXNOILG}(-1) + B(7131) * (\text{IRXGNODOP} - \text{IRXGNODOP}(-1))$$

Observations: 42

R-squared	0.909462	Mean dependent var	6392.519
Adjusted R-squared	0.909462	S.D. dependent var	5924.899
S.E. of regression	1782.771	Sum squared resid	1.30E+08
Durbin-Watson stat	2.040257		

$$\text{Equation: IRXNFS} = \text{IRXNFS}(-1) + B(7141) * (\text{IRXNFS} - \text{IRXNFS}(-1)) + B(7142) * \text{IRXNFS}(-1)$$

Observations: 42

R-squared	0.909532	Mean dependent var	1016.454
Adjusted R-squared	0.909532	S.D. dependent var	1399.142
S.E. of regression	420.8330	Sum squared resid	7261116.
Durbin-Watson stat	1.956043		

$$\text{Equation: IRINPUT} = \text{IRINPUT}(-1) + B(7151) * (\text{IRGDPF} - \text{IRGDPF}(-1)) + B(7152) * \text{IRD79}$$

Observations: 42

R-squared	0.978640	Mean dependent var	101338.9
Adjusted R-squared	0.978106	S.D. dependent var	42925.02
S.E. of regression	6351.483	Sum squared resid	1.61E+09



Durbin-Watson stat 2.043439

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$$\text{Equation: } \text{IRII} = \text{B}(7160) + \text{B}(7161) * (\text{IRII}(-1) / \text{IROUTPUT}(-1)) * (\text{IROUTPUT}(-1) - \text{IROUTPUT}(-1)) + \text{B}(7162) * \text{IRII}(-1) + \text{B}(7163) * \text{IRYEAR} + \text{B}(7164) * \text{IRPGDPF} + \text{B}(7165) * \text{IRD8285}$$

Observations: 42

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R-squared	0.622934	Mean dependent var	10594.42
Adjusted R-squared	0.570564	S.D. dependent var	13185.99
S.E. of regression	8640.959	Sum squared resid	2.69E+09
Durbin-Watson stat	2.157665		

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$$\text{Equation: } \text{IRGV} = \text{IRGV}(-1) + \text{B}(9011) * ((\text{IRGECV} + \text{IRGESV}) - (\text{IRGECV}(-1) - \text{IRGESV}(-1)))$$

Observations: 42

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R-squared	0.991180	Mean dependent var	11143.50
Adjusted R-squared	0.991180	S.D. dependent var	22135.08
S.E. of regression	2078.786	Sum squared resid	1.77E+08
Durbin-Watson stat	2.557377		

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$$\text{Equation: } \text{IRIGV} = \text{IRIGV}(-1) + \text{B}(9021) * (\text{IRGEDV} - \text{IRGEDV}(-1)) + \text{B}(9022) * (\text{IRFEOAV} - \text{IRFEOAV}(-1)) + \text{B}(9023) * \text{IROLGV} + \text{B}(9024) * \text{IRD9497}$$

Observations: 42

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R-squared	0.991531	Mean dependent var	7696.626
Adjusted R-squared	0.990863	S.D. dependent var	14718.28
S.E. of regression	1406.924	Sum squared resid	75218502
Durbin-Watson stat	1.113842		

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$$\text{Equation: } \text{IRSUBV} = \text{IRSUBV}(-1) + \text{B}(9031) * (\text{IRGECV} + \text{IRGESV} - \text{IRGECV}(-1) - \text{IRGESV})$$

Observations: 42

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R-squared	0.988454	Mean dependent var	1441.450
Adjusted R-squared	0.988454	S.D. dependent var	2760.211
S.E. of regression	296.5974	Sum squared resid	3606771.
Durbin-Watson stat	1.759193		

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$$\text{Equation: } \text{IRCV} = \text{IRCV}(-1) + \text{B}(9041) * (\text{IRYDV} - \text{IRYDV}(-1)) + \text{B}(9042) * \text{IRSPV}(-1)$$

Observations: 42

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R-squared	0.999258	Mean dependent var	39242.57
Adjusted R-squared	0.999240	S.D. dependent var	78039.24
S.E. of regression	2151.769	Sum squared resid	1.85E+08
Durbin-Watson stat	1.421272		

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$$\text{Equation: } \text{IRVAOILV} = \text{IRVAOILV}(-1) + \text{B}(9051) * (\text{IRXOILD} / 1000 * \text{IREO} - \text{IRXOILD}(-1) / 1000 * \text{IREO}(-1)) + \text{B}(9052) * (\text{IRPDOIL} * (\text{IRYOILB} - \text{IRXOILB}) - \text{IRPDOIL}(-1) * (\text{IRYOILB}(-1) - \text{IRXOILB}(-1)))$$

Observations: 42

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R-squared	0.969713	Mean dependent var	11776.90
Adjusted R-squared	0.968956	S.D. dependent var	24796.84
S.E. of regression	4369.023	Sum squared resid	7.64E+08
Durbin-Watson stat	1.857302		

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$$\text{Equation: } \text{IRMGV} = \text{IRMGV}(-1) + \text{B}(9061) * (\text{IRMGD} * \text{IREENOIL} - \text{IRMGD}(-1) * \text{IREENOIL}(-1))$$

Observations: 42

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R-squared	0.996105	Mean dependent var	11768.84
Adjusted R-squared	0.996105	S.D. dependent var	24222.58

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S.E. of regression	1511.657	Sum squared resid	93689349
Durbin-Watson stat	2.092906		

$$\text{Equation: IRMNFSV} = \text{IRMNFSV}(-1) + \text{B}(9071) * (\text{IRMNFSV} * \text{IREENOIL} - \text{IRMNFSV}(-1) * \text{IREENOIL}(-1))$$

Observations: 42

R-squared	0.998426	Mean dependent var	1544.622
Adjusted R-squared	0.998426	S.D. dependent var	3250.697
S.E. of regression	128.9720	Sum squared resid	681984.6
Durbin-Watson stat	1.457563		

$$\text{Equation: IRXFYV} = \text{IRXFYV}(-1) + \text{B}(9081) * (\text{IRXFYV} * \text{IREENOIL} - \text{IRXFYV}(-1) * \text{IREENOIL}(-1))$$

Observations: 42

R-squared	0.934152	Mean dependent var	645.1677
Adjusted R-squared	0.934152	S.D. dependent var	1218.204
S.E. of regression	312.6009	Sum squared resid	4006493.
Durbin-Watson stat	2.363835		

$$\text{Equation: IRMFYV} = \text{IRMFYV}(-1) + \text{B}(9090) + \text{B}(9091) * (\text{IRMFYV} * \text{IREENOIL} - \text{IRMFYV}(-1) * \text{IREENOIL}(-1)) + \text{B}(9092) * \text{IRD93} + \text{B}(9093) * \text{IRD5992}$$

Observations: 42

R-squared	0.992043	Mean dependent var	788.2966
Adjusted R-squared	0.991414	S.D. dependent var	1336.829
S.E. of regression	123.8688	Sum squared resid	583052.6
Durbin-Watson stat	1.134625		

$$\text{Equation: IRITV} = \text{IRITV}(-1) + \text{B}(9101) * (\text{IRGRTIV} - \text{IRGRTIV}(-1))$$

Observations: 42

R-squared	0.973186	Mean dependent var	1931.836
Adjusted R-squared	0.973186	S.D. dependent var	3790.506
S.E. of regression	620.6952	Sum squared resid	15795762
Durbin-Watson stat	2.168030		

$$\text{Equation: IRIPV} = \text{IRIPV}(-1) + \text{IROLPV} + \text{B}(9111) * (\text{IRIRL} - \text{IRIRL}(-1)) + \text{B}(9112) * (\text{IRIRNB} - \text{IRIRNB}(-1)) + \text{B}(9113) * (\text{IROUTPUTV} - \text{IROUTPUTV}(-1)) + \text{B}(9114) * \text{IRD99}$$

Observations: 42

R-squared	0.992651	Mean dependent var	13482.63
Adjusted R-squared	0.992071	S.D. dependent var	29149.78
S.E. of regression	2595.682	Sum squared resid	2.56E+08
Durbin-Watson stat	0.911471		

$$\text{Equation: IRXOILV} = \text{IRXOILV}(-1) + \text{B}(9121) * (\text{IRXOILD} * \text{IREO} - \text{IRXOILD}(-1) * \text{IREO}(-1)) + \text{B}(9122) * \text{IRD93} + \text{B}(9123) * \text{IRD9605}$$

Observations: 42

R-squared	0.989394	Mean dependent var	10641.24
Adjusted R-squared	0.988851	S.D. dependent var	22113.26
S.E. of regression	2334.961	Sum squared resid	2.13E+08
Durbin-Watson stat	2.182521		

$$\text{Equation: IRXNOILGV} = \text{B}(9131) * (\text{IRXGNOD} * \text{IREENOIL} - \text{IRXGNOD}(-1) * \text{IREENOIL}(-1)) + \text{IRXNOILGV}(-1)$$

Observations: 42

R-squared	0.985791	Mean dependent var	4413.642
Adjusted R-squared	0.985791	S.D. dependent var	9297.713

S.E. of regression	1108.290	Sum squared resid	50360561
Durbin-Watson stat	2.255421		

$$\text{Equation: IRXNFSV} = \text{IRXNFSV}(-1) + \text{B}(9141) * (\text{IRXNFSD} * \text{IREENOIL} - \text{IRXNFSD}(-1) * \text{IREENOIL}(-1))$$

Observations: 42

R-squared	0.991218	Mean dependent var	810.7540
Adjusted R-squared	0.991218	S.D. dependent var	2357.134
S.E. of regression	220.8957	Sum squared resid	2000592.
Durbin-Watson stat	2.372626		

$$\text{Equation: IRIIV} = \text{IRIIV}(-1) + \text{B}(9151) * (\text{IRIIV}(-1) / \text{IRINPUTV}(-1)) * (\text{IRINPUTV} - \text{IRINPUTV}(-1)) + \text{B}(9152) * (\text{IRIIV}(-1) / \text{IRGDPFV}(-1)) * (\text{IRGDPFV} - \text{IRGDPFV}(-1)) + \text{B}(9153) * \text{IRD9596} + \text{B}(9154) * \text{IRD00}$$

Observations: 42

R-squared	0.963014	Mean dependent var	4068.803
Adjusted R-squared	0.960094	S.D. dependent var	8959.588
S.E. of regression	1789.807	Sum squared resid	1.22E+08
Durbin-Watson stat	1.323435		

$$\text{Equation: IREM} = \text{IREM}(-1) + \text{B}(20011) * (\text{IRM2V} - \text{IRM2V}(-1)) + \text{B}(20012) * \text{IRBOPD} + \text{B}(20013) * \text{IRGRDSV} + \text{B}(20014) * \text{IRD99}$$

Observations: 42

R-squared	0.993304	Mean dependent var	1455.924
Adjusted R-squared	0.992775	S.D. dependent var	2421.946
S.E. of regression	205.8675	Sum squared resid	1610495.
Durbin-Watson stat	2.310237		

$$\text{Equation: IREENOIL} = \text{IREO} * \text{IRD5978} + (1 - \text{IRD5978}) * (\text{B}(20020) + \text{B}(20021) * \text{IREM} + (1 - \text{B}(20021)) * \text{IREO}) + \text{B}(20022) * \text{IREENOIL}(-1) + \text{B}(20023) * \text{IRD9305}$$

Observations: 42

R-squared	0.994083	Mean dependent var	839.0864
Adjusted R-squared	0.993616	S.D. dependent var	1578.044
S.E. of regression	126.0902	Sum squared resid	604152.1
Durbin-Watson stat	1.643554		

$$\text{Equation: IRWPIM} = \text{IRWPIM}(-1) + \text{B}(20031) * ((\text{IRMGD} / (\text{IRMGD} + \text{IRMNFSD})) * \text{IRPM}) - ((\text{IRMGD}(-1) / (\text{IRMGD}(-1) + \text{IRMNFSD}(-1))) * \text{IRPM}(-1)))$$

Observations: 42

R-squared	0.987490	Mean dependent var	24.18810
Adjusted R-squared	0.987490	S.D. dependent var	44.19849
S.E. of regression	4.943507	Sum squared resid	1001.969
Durbin-Watson stat	1.190515		

$$\text{Equation: IRWPIX} = \text{IRWPIX}(-1) + \text{B}(20041) * (((\text{IRXGNOD} / (\text{IRXGD} + \text{IRXNFSD})) * \text{IRPX}) - ((\text{IRXGNOD}(-1) / (\text{IRXGD}(-1) + \text{IRXNFSD}(-1))) * \text{IRPX}(-1)))$$

Observations: 42

R-squared	0.964107	Mean dependent var	31.39976
Adjusted R-squared	0.964107	S.D. dependent var	61.38412
S.E. of regression	11.62946	Sum squared resid	5545.017
Durbin-Watson stat	1.390797		

$$\text{Equation: IRWPID} = \text{IRWPID}(-1) + \text{B}(20051) * (\text{IRPGDPNF} - \text{IRPGDPNF}(-1))$$

Observations: 42

R-squared	0.997642	Mean dependent var	26.23429
Adjusted R-squared	0.997642	S.D. dependent var	48.07975
S.E. of regression	2.334504	Sum squared resid	223.4462
Durbin-Watson stat	1.175196		

$$\text{Equation: IRWPI} = B(20061) * \text{IRWPID} + B(20062) * \text{IRWPIM} + (1 - B(20061) - B(20062)) * \text{IRWPIX}$$

Observations: 43

R-squared	0.999987	Mean dependent var	25.32744
Adjusted R-squared	0.999986	S.D. dependent var	47.21242
S.E. of regression	0.174838	Sum squared resid	1.253306
Durbin-Watson stat	0.934295		

$$\text{Equation: IRCPI} = \text{IRCPI}(-1) + B(20071) * (\text{IRPGDPNF} - \text{IRPGDPNF}(-1)) + B(20072) * \text{IRD00}$$

Observations: 42

R-squared	0.999629	Mean dependent var	26.57548
Adjusted R-squared	0.999619	S.D. dependent var	46.73159
S.E. of regression	0.911851	Sum squared resid	33.25889
Durbin-Watson stat	1.383198		

$$\text{Equation: IRIRNB} = B(20080) + B(20081) * \text{IRIRNB}(-1) + B(20082) * (\text{IRSPV} - \text{IRSPV}(-1)) + (\text{IRCPI} - \text{IRCPI}(-1)) / \text{IRCPI}(-1) + B(20083) * \text{IRD7905} + B(20084) * \text{IRD9699}$$

Observations: 42

R-squared	0.930624	Mean dependent var	32.77515
Adjusted R-squared	0.923124	S.D. dependent var	11.46420
S.E. of regression	3.178623	Sum squared resid	373.8349
Durbin-Watson stat	2.083639		

$$\text{Equation: IRPCCA} = \text{IRPCCA}(-1) + B(20091) * (\text{IRPK} - \text{IRPK}(-1))$$

Observations: 42

R-squared	0.995770	Mean dependent var	0.248298
Adjusted R-squared	0.995770	S.D. dependent var	0.471343
S.E. of regression	0.030657	Sum squared resid	0.038534
Durbin-Watson stat	0.931474		

$$\text{Equation: IRPINPUT} = \text{IRPINPUT}(-1) + B(20101) * (\text{IRPGDPF} - \text{IRPGDPF}(-1))$$

Observations: 42

R-squared	0.999170	Mean dependent var	0.265189
Adjusted R-squared	0.999170	S.D. dependent var	0.488025
S.E. of regression	0.014061	Sum squared resid	0.008106
Durbin-Watson stat	1.821516		

$$\text{Equation: IRPOPAPOP} = B(31010) + B(31011) * \text{IRPOPAPOP}(-1) + B(31012) * \text{IRYEAR} + B(31013) * \text{IRD66}$$

Observations: 42

R-squared	0.982948	Mean dependent var	0.282361
Adjusted R-squared	0.981601	S.D. dependent var	0.015549
S.E. of regression	0.002109	Sum squared resid	0.000320
Durbin-Watson stat	0.490109		

$$\text{Equation: IRPOP} = B(31020) + B(31021) * \text{IRPOP}(-1)$$

Observations: 42

R-squared	0.999394	Mean dependent var	41884.48
Adjusted R-squared	0.999379	S.D. dependent var	14160.53
S.E. of regression	352.8086	Sum squared resid	4978955.

Durbin-Watson stat 0.223695

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Equation: IRWINDPGDPM=IRWINDPGDPM(-1)+B(31031)\*(IREMP-IREMP(-1))

+B(31032)\*(IRGDPM-IRGDPM(-1))+B(31033)\*IRD7579

+B(31034)\*IRD7880

Observations: 42

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R-squared	0.951594	Mean dependent var	83.21271
Adjusted R-squared	0.947773	S.D. dependent var	34.42372
S.E. of regression	7.866943	Sum squared resid	2351.774
Durbin-Watson stat	1.600701		

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Equation: IREMP=IREMP(-1)+B(31041)\*(IRWIND-IRWIND(-1))

+B(31042)\*IRPOPA+B(31043)\*IRD66+B(31044)\*IRD76

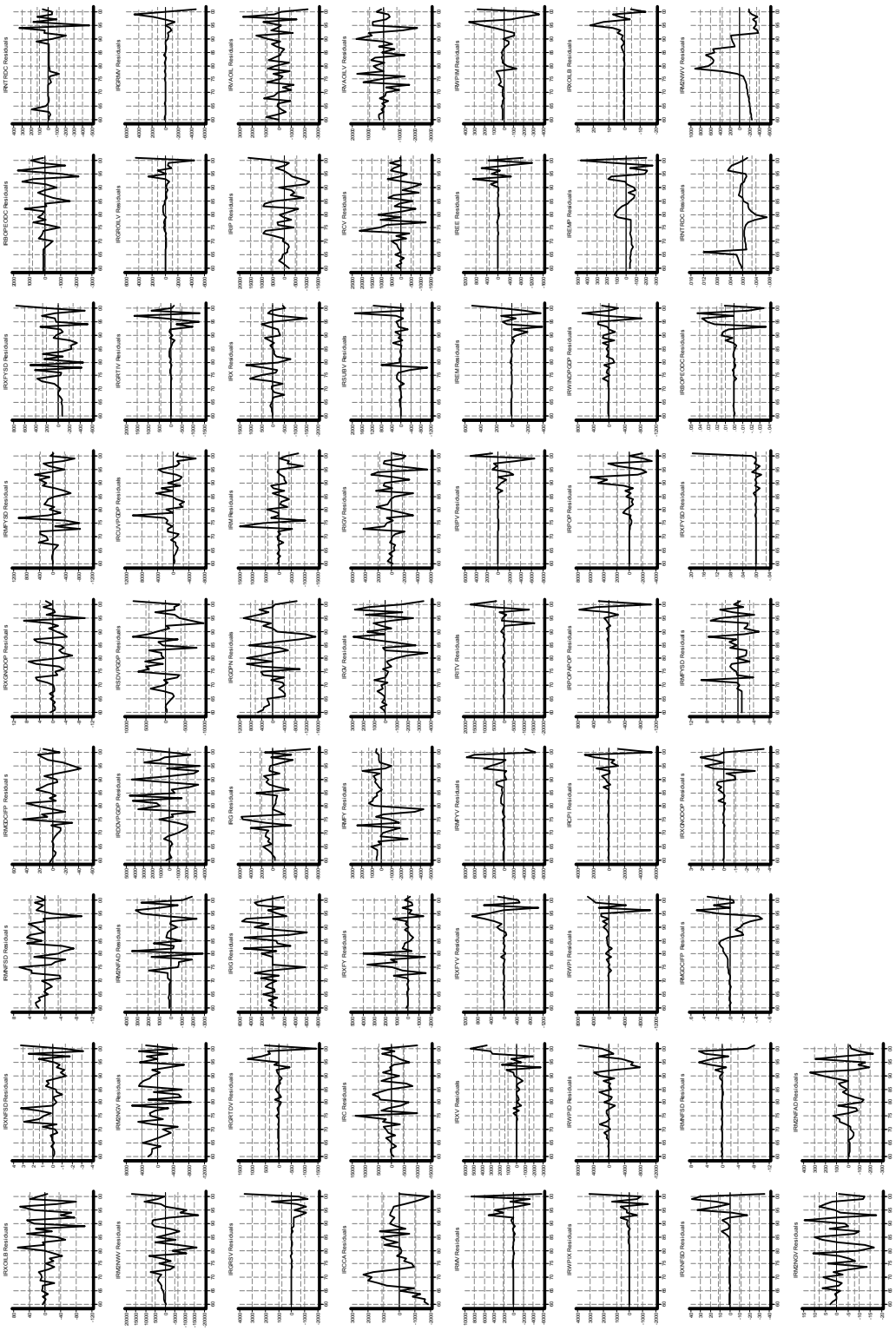
Observations: 42

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R-squared	0.998691	Mean dependent var	10516.23
Adjusted R-squared	0.998588	S.D. dependent var	3094.625
S.E. of regression	116.3047	Sum squared resid	514017.4
Durbin-Watson stat	1.393070		

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# Plot of residuals



## Numerical model

### 'Foreign sector

'1:Balance of trade, million Dollars

$$\text{IRTBD} = \text{IRXGD} - \text{IRMGD}$$

'2:Balance of services, million Dollars

$$\text{IRSBD} = \text{IRXSD} - \text{IRMSD}$$

'3:Current account, million Dollars

$$\text{IRCAD} = \text{IRTBD} + \text{IRSBD} + \text{IRNTRD}$$

'4:Balance of payments, million Dollars

$$\text{IRBOPD} = \text{IRCAD} + \text{IRKAD} + \text{IRBOPEOD}$$

'5:Export of goods, million Dollars

$$\text{IRXGD} = \text{IRXOILD} + \text{IRXGNOD}$$

'6:Export of non-factor services, million Dollars

$$\text{IRXNFSD} = \text{IRXNFSDOP} * \text{OECDP}$$

'7:Import of non-factor services, million Dollars

$$\text{IRMNFSD} = \text{IRMNFSDCIFP} * \text{IRCIFP}$$

'8:Export of non-oil goods, million Dollars

$$\text{IRXGNOD} = \text{IRXGNODOP} * \text{OECDP}$$

'9:Import of goods, million Dollars

$$\text{IRMGD} = \text{IRMGDCIFP} * \text{IRCIFP}$$

'10:Export of services, million Dollars

$$\text{IRXSD} = \text{IRXNFSD} + \text{IRXFYSD}$$

'11:Import of services, million Dollars

$$\text{IRMSD} = \text{IRMNFSD} + \text{IRMFYSD}$$

'12:Balance of factor income services, million Dollars

$$\text{IRFYSBD} = \text{IRXFYSD} - \text{IRMFYSD}$$

'13:Balance of non-factor income services, million Dollars

$$\text{IRNFSD} = \text{IRXNFSD} - \text{IRMNFSD}$$

'14:Cumulative balance of payments, million Dollars

$$\text{IRBOPDC} = \text{IRBOPDC}(-1) + \text{IRBOPD}$$

'15:Balance of payments errors and omissions, million Dollars

$$\text{IRBOPEOD} = \text{IRBOPEODC} - \text{IRBOPEODC}(-1)$$

'16:Cumulative capital account, million Dollars

$$\text{IRKADC} = \text{IRKADC}(-1) + \text{IRKAD}$$

'17:Cumulative current account, million Dollars  
IRCADC = IRCADC(-1) + IRCAD

'18:Cumulative balance of trade, million Dollars  
IRTBDC = IRTBDC(-1) + IRTBD

'19:Cumulative balance of services, million Dollars  
IRSBDC = IRSBDC(-1) + IRSBD

'20:Net transfers, million Dollars  
IRNTRD = IRNTRDC - IRNTRDC(-1)

'21:Cumulative factor income services balance, million Dollars  
IRFYSBDC = IRFYSBDC(-1) + IRFYSBD

'22:Cumulative non-factor income services balance, million Dollars  
IRNFSBDC = IRNFSBDC(-1) + IRNFSBD

'23:Export of oil, million Dollars  
IRXOILD = IRWPOIL \* IRXOILB

'101:Export of oil, million barrels/year  
IRXOILB = IRXOILB(-1) + 0.9421649185 \* (IRYOILB - IRYOILB(-1))

'102:Export of non-factor services, million Dollars  
IRXNFSDOP = IRXNFSDOP(-1) + 0.0004312024601 \* IREENOIL + 5.045214227e-05 \*  
(IRGDPNF - IRGDPNF(-1)) - 15.64872398 \* IRD79

'103:Import of non-factor services, million Dollars  
IRMNFSDCIFP = IRMNFSDCIFP(-1) - 3.019908835 - 0.002908291366 \* (IREENOIL \*  
IRCIFP / IRWPI - IREENOIL(-1) \* IRCIFP(-1) / IRWPI(-1)) + 0.0003366117589 \* (IRGDPM  
- IRGDPM(-1)) + 17.42417261 \* (IRD77 + IRD79) + 18.41738174 \* IRD88

'104:Real import of goods, million Dollars  
IRMGDCIFP = 12.19521679 + 0.007110573591 \* (IRXGD + IRXSD) - 0.01770658061 \*  
IREENOIL + 0.0004609347216 \* IRGDPM - 0.7806278558 \* IRCIFP + 0.005405823567 \*  
IRKAD - 82.7593915 \* IRD79

'105:Real export of non-oil goods, million Dollars  
IRXGNODOP = - 4.42799977 + 0.002120735762 \* IREX \* OECDP / IRWPI + 0.7112601193  
\* IRXGNODOP(-1) + 2.153260551e-05 \* IRGDPNF

'106:Import of factor income services, million Dollars  
IRMFYSD = 1817.933684 + (2.687006933 - 2.302536771 \* (1 - IRD5977)) \* IRKADC \*  
LIBOR / 100 + 0.1951548419 \* IRMFYSD(-1) + 0.2651637263 \* IRD5978 \* IRMGD -  
1900.653315 \* IRD5977

'107:Export of factor income services, million Dollars  
IRXFYSD = 94.57296332 + 0.2492109877 \* IRGEFIDC - 1634.033504 \* (1 - IRD5978) +  
0.5230041697 \* IRXFYSD(-1)

'108:Cumulative balance of payments errors and omissions, million Dollars



IRBOPEODC = (-2234.540785 - 0.2037647364 \* IRKADC - 0.2347877906 \* IRTBDC - 0.4558770962 \* IRFYBDC + 0.09839420622 \* IRNFSBDC) \* (1 - 0.9631932897 \* IRD5970) - 4305.550037 \* IRD84

@ADD IRBOPEODC IRBOPEODC\_A

'109:Cumulative net transfers, million Dollars

IRNTRDC = IRNTRDC(-1) + (4378.887583 - 0.08577277262 \* IRKADC - 0.02320636076 \* IRTBDC + 0.5759976363 \* IRFYBDC - 0.2725725718 \* IRNFSBDC - 0.0702545279 \* IRBOPEODC) \* (1 - 0.9968823224 \* IRD5988)

@ADD IRNTRDC IRNTRDC\_A

## 'Monetary sector

'201:Net claim of banking system to government sector (including public government), billion Rials

IRM2NGV = IRM2NGGV + IRM2NGSV

'202:Net claim of banking system to public government , billion Rials

IRM2NGGV = IRGBDVC + IRFEOAV + IROLVC

'203:Net claim of banking system to government sector (excluding public government) at constant prices, billion Rials

IRM2NGSV = IRM2NGSVPGDPM \* IRPGDPM

'204:Net claim of banking system to private sector at constant prices, billion Rials

IRM2NPV = IRM2NPVPGDPM \* IRPGDPM

'205:Cumulative obligatory loans in government budget, billion rials

IROLVC = IROLVC(-1) + IROLV

'206:Obligatory loans in government budget, billion rials

IROLV = IROLPV + IROLGV

'207:Demand deposits of private sector, billion Rials

IRDDV = IRDDVPGDPM \* IRPGDPM

'208:Saving and time deposits of private sector, billion Rials

IRSDV = IRSDVPGDPM \* IRPGDPM

'209:Currency in hands of public, billion Rials

IRCUV = IRCUVPGDPM \* IRPGDPM

'210:Liquidity, billion Rials

IRM2V = IRCUV + IRDDV + IRSDV

'211:Net foreign assets of banking system, billion Rials

IRM2NFAV = IRM2NFAD / (((1 - IRD93 - IRD90 - IRD91 - IRD92) / IREO + IRD93 / 1748 + IRD90 / 221.89 + IRD91 / 351.9 + IRD92 / 641.2) \* 1000)

'212:Net worth and other items net of banking system, billion Rials

IRM2NWV = IRM2V - (IRM2NPV + IRM2NGV + IRM2NFAV)

'301:Net claim of banking system to private sector at constant prices, billion Rials  
 $IRM2NPVPGDPM = 197.3411457 * IRIRL + IRM2NPVPGDPM(-1) + 16754.21324 * IRD7576$

'302:Net claim of banking system to government sector (excluding public government) at constant prices, billion Rials  
 $IRM2NGSVPGDPM = - 7268.06792 + IRM2NGSVPGDPM(-1) + 881.915249 * IRIRL - 16584.81492 * IRD9497 + 0.1950207198 * IRD5978 * IRM2NGSVPGDPM(-1)$

'303:Net foreign assets of banking system, million Dollars  
 $IRM2NFAD = 0.6120774057 * IRBOPDC + 0.4274963336 * IRM2NFAD(-1) + 4192.961468 * IRD8589 - 3056.327411 * IRD9705$   
@ADD IRM2NFAD IRM2NFAD\_A

'304:Real demand deposits of private sector, billion Rials  
 $IRDDVPGDPM = 0.05391211659 * IRGDPM + 0.7664785186 * IRDDVPGDPM(-1) - 1211.949757 * IRIRS + 165.892385 * IRIRNB$

'305:Real saving and time deposits of private sector, billion Rials  
 $IRSDVPGDPM = 5192.525799 + 0.1328266443 * IRGDPM - 2458.732698 * IRIRS + 0.748266289 * IRSDVPGDPM(-1)$

'306:Real currency in hands of public, billion Rials  
 $IRCUVPGDPM = 24845.29513 + 0.5114820639 * IRCUVPGDPM(-1) + 0.06524292188 * IRGDPM - 12237.21485 * IRD5977 - 1387.776653 * IRIRL - 271.9006771 * IRIRNB - 5762.144557 * IRD79$

### 'Government sector

'401:Cumulative government budget deficit, billion Rials  
 $IRGBDVC = IRGBDVC(-1) - IRGBDV$

'402:Government revenue, billion Rials  
 $IRGRV = IRGROILV + IRGRTV + IRGRMV + IRGRDSV + IRGRSV$

'403:Government tax revenue, billion Rials  
 $IRGRTV = IRGRTDV + IRGRTIV$

'404:Government expenditure, billion Rials  
 $IRGEV = IRGECV + IRGEDV + IRGESV + IRGESPV + IRGEFIV$

'405:Government budget deficit, billion Rials  
 $IRGBDV = IRGRV - IRGEV$

'406:Government special expenditures, billion Rials  
 $IRGESV = IRGRSV$

'407:Cumulative government expenditures in foreign investment, million Dollars  
 $IRGEFIDC = IRGEFIDC(-1) + IRGEFIV / IREO * 1000$

'501:Government indirect tax revenue, billion Rials

$$\text{IRGRTIV} = \text{IRGRTIV}(-1) + 0.06411650119 * (\text{IRMGV} - \text{IRMGV}(-1)) + 0.01135931298 * (\text{IROUTPUTV} - \text{IROUTPUTV}(-1) - (\text{IRMGV} - \text{IRMGV}(-1)))$$

'502:Government oil revenue, billion Rials

$$\begin{aligned} \text{IRGROILV} = & 0.6739666775 * (1 - \text{IRD93}) * \text{IREO} * (\text{IRXOILD}/1000 - \text{IRGRDSV} / \\ & \text{IREM}) + 0.09066751047 * \text{IRPDOIL} * (\text{IRYOILB} - \text{IRXOILB}) + 0.8573760193 * \\ & \text{IRD93} * (0.58 * 1000 + 0.42 * (\text{IREO} - 1000)) * (\text{IRXOILD}/1000 - \text{IRGRDSV} / \text{IREM}) - 8272.686 * \\ & \text{IRD0005} + 7498.999585 * \text{IRD9597} \\ & @\text{ADD IRGROILV IRGROILV\_A} \end{aligned}$$

'503:Government miscellaneous revenue, billion Rials

$$\text{IRGRMV} = 0.03119464158 * (\text{IROUTPUTV} - \text{IROUTPUTV}(-1)) + \text{IRGRMV}(-1) - 15991.31204 * \text{IRD00}$$

'504:Government special revenue, billion Rials

$$\text{IRGRSV} = \text{IRGRSV}(-1) + 0.02418254752 * (\text{IROUTPUTV} - \text{IROUTPUTV}(-1))$$

'505:Government direct tax revenue, billion Rials

$$\text{IRGRTDV} = \text{IRGRTDV}(-1) + 0.02192075408 * (\text{IROUTPUTV} - \text{IROUTPUTV}(-1))$$

### 'Real sector

'601: Real aggregate demand, billion Rials

$$\text{IRAD} = \text{IRINPUT} + \text{IRC} + \text{IRG} + \text{IRI} + \text{IRDIS} + \text{IRX} + \text{IRTOT}$$

'602: Real aggregate supply, billion Rials

$$\text{IRAS} = \text{IROUTPUT} + \text{IRNIT} + \text{IRM} + \text{IRTOT}$$

'603:Real aggregate output, billion Rials

$$\text{IROUTPUT} = \text{IRINPUT} + \text{IRGDPF}$$

'604:Real gross national saving, billion Rials

$$\text{IRGNS} = \text{IRI} + \text{IRII} + \text{IRBOT} + \text{IRNFY} + \text{IRTOT}$$

'605:Real net national saving, billion Rials

$$\text{IRNNS} = \text{IRGNS} - \text{IRCCA}$$

'606:Real export, billion Rials

$$\text{IRX} = \text{IRXOIL} + \text{IRXNOILG} + \text{IRXNFS}$$

'607:Real import, billion Rials

$$\text{IRM} = \text{IRMG} + \text{IRMNFS}$$

'608: Real balance of trade , billion Rials

$$\text{IRBOT} = \text{IRX} - \text{IRM}$$

'609: Real gross domestic expenditure at market prices, billion Rials

$$\text{IRGDEM} = \text{IRC} + \text{IRG} + \text{IRI} + \text{IRBOT} + \text{IRDIS}$$

'610: Private saving, billion Rials

$$\text{IRSP} = \text{IRYD} - \text{IRC}$$

'611:Terms of trade, billion Rials

$$\text{IRTOT} = 2 * ( (\text{IRXV} * \text{IRM}) - (\text{IRMV} * \text{IRX}) ) / (\text{IRXV} + \text{IRMV})$$

'612:Real gross domestic income at market prices, billion Rials

$$\text{IRGDIM} = \text{IRGDPM} + \text{IRTOT}$$

'613:Real discrepancies, billion Rials

$$\text{IRDIS} = \text{IRGDPM} - (\text{IRC} + \text{IRG} + \text{IRI} + \text{IRBOT})$$

'614:Real gross national product at market prices, billion Rials

$$\text{IRGNPM} = \text{IRGDPM} + \text{IRNFY}$$

'615:Real gross national income at market prices, billion Rials

$$\text{IRGNIM} = \text{IRGNPM} + \text{IRTOT}$$

'616:Real net national income at factor cost, billion Rials

$$\text{IRNNIF} = \text{IRGNIM} - \text{IRCCA} - \text{IRNIT}$$

'617:Real net factor income, billion Rials

$$\text{IRNFY} = \text{IRXFY} - \text{IRMFY}$$

'618:Net indirect taxes, billion Rials

$$\text{IRNIT} = \text{IRIT} - \text{IRSUB}$$

'619:Real capital stock, billion Rials

$$\text{IRK} = \text{IRK}(-1) + \text{IRI} - \text{IRCCA}$$

'620:Real gross domestic product at market prices, billion Rials

$$\text{IRGDPM} = \text{IRGDPNF} + \text{IRVAOIL} + \text{IRNIT}$$

'621:Real disposable income, billion Rials

$$\text{IRYD} = \text{IRGDPNF} + \text{IRNFY} - \text{IRCCA} - \text{IRGRTDV} / \text{IRPIT}$$

'622:Real investment, billion Rials

$$\text{IRI} = \text{IRIP} + \text{IRIG}$$

'623:Real indirect taxes, billion Rials

$$\text{IRIT} = \text{IRITV} / \text{IRPIT}$$

'624:Real subsidies, billion Rials

$$\text{IRSUB} = \text{IRSUBV} / \text{IRPSUB}$$

'625:Real gross domestic product at factor cost, billion Rials

$$\text{IRGDPF} = \text{IRGDPNF} + \text{IRVAOIL}$$

'701:Real government investment, billion Rials

$$\text{IRIG} = \text{IRIG}(-1) + 64.97023066 * (\text{IRGEDV} / \text{IRWPI} - \text{IRGEDV}(-1) / \text{IRWPI}(-1)) + 18388.42421 *$$

$$\text{IRD76} - 16350.31245 * \text{IRD77} + 26806.71219 * \text{IRD78} - 21156.09522 * \text{IRD79}$$

$$\text{@ADD IRIG IRIG\_A}$$

'702:Real government consumption, billion Rials

IRG = IRG(-1) + 47.90631602 \* ((IRGECV + IRGESV) / IRWPI - (IRGECV(-1) + IRGESV(-1)) / IRWPI(-1))  
@ADD IRG IRG\_A

'703:Real non-oil gross domestic product at market price, billion Rials  
IRGDPNF = - 56494.46455 + 0.04102210629 \* IRK(-1) + 1.057557423 \* (IRIP + IRIG - IRM \* IRMACHIMV) + 11.89875024 \* IREMP + 0.3000592979 \* IRM \* IRMACHIMV + 30449.56677 \* IRD79

'704:Real import if goods, billion Rials  
IRMG = 390.7945812 \* (IRMGDCIFP - IRMGDCIFP(-1)) + IRMG(-1)  
@ADD IRMG IRMG\_A

'705:Real import if non-factor services, billion Rials  
IRMNFS= 401.9236581 \* (IRMNFSDCIFP - IRMNFSDCIFP(-1)) + 0.9871274703 \* IRMNFS(-1)  
@ADD IRMNFS IRMNFS\_A

'706:Real private investment, billion Rials  
IRIP = 12350.2109 + 0.2033390009 \* IRGDPNF(-1) + 1.75474858 \* IRM \* IRMACHIMV - 2323.439977 \* IRIRL - 20221.16352 \* IRD7779

'707:Real value added of oil, billion Rials  
IRVAOIL= 0.9956180666 \* IRVAOIL(-1) + 40.918526 \* (IRXOILB - IRXOILB(-1)) + 7.844505463 \* ((IRYOILB - IRXOILB) - (IRYOILB(-1) - IRXOILB(-1)))  
@ADD IRVAOIL IRVAOIL\_A

'708:Real capital consumption allowances, billion Rials  
IRCCA = 5476.559895 + 0.03511328534 \* IRK(-1) + 0.02236267629 \* (IRWARCD + IRWARED + IRWARMD) + 5716.410645 \* IRD01

'709:Real private consumption, billion Rials  
IRC = 0.3203998692 \* (IRYD - IRYD(-1)) + 0.08010636438 \* IRSP(-1) + IRC(-1)

'710:Export of factor income from abroad, billion Rials  
IRXFY = IRXFY(-1) + 243.6374116 \* (IRXFYSD / OECDP - IRXFYSD(-1) / OECDP(-1)) - 5057.098811 \* IRD7879  
@ADD IRXFY IRXFY\_A

'711:Import of factor income from abroad, billion Rials  
IRMFY = IRMFY(-1) - 369.2889988 + 163.9523646 \* (IRMFYSD / OECDP - IRMFYSD(-1) / OECDP(-1)) + 3154.100611 \* IRD7377  
@ADD IRMFY IRMFY\_A

'712:Real oil export, billion Rials  
IRXOIL = IRXOIL(-1) + 39.44911441 \* (IRXOILB - IRXOILB(-1)) - 5922.489279 \* IRD73 + 4820.156933 \* IRD83  
@ADD IRXOIL IRXOIL\_A

'713:Real export of goods, billion Rials  
IRXNOILG = 515.4733331 \* (IRXGNODOP - IRXGNODOP(-1)) + IRXNOILG(-1)  
@ADD IRXNOILG IRXNOILG\_A

'714:Real export of non factor services, billion Rials

$$\text{IRXNFS} = 159.5694452 * (\text{IRXNFSDOP} - \text{IRXNFSDOP}(-1)) + \text{IRXNFS}(-1)$$

@ADD IRXNFS IRXNFS\_A

'715:Real input of production, billion Rials

$$\text{IRINPUT} = \text{IRINPUT}(-1) + 0.4928724038 * (\text{IRGDPF} - \text{IRGDPF}(-1)) - 37450.59065 * \text{IRD79}$$

'716:Real changes in inventory, billion Rials

$$\text{IRII} = - 862614.1351 + 2.205403783 * (\text{IRII}(-1) / \text{IROUTPUT}(-1)) * (\text{IROUTPUT} - \text{IROUTPUT}(-1)) + 0.26732462 * \text{IRII}(-1) + 642.8802462 * \text{IRYEAR} - 9355.795714 * \text{IRPGDPF} - 19100.66493 * \text{IRD8285}$$

### 'Nominal values

'801: Nominal aggregate demand, billion Rials

$$\text{IRADV} = \text{IRINPUTV} + \text{IRCV} + \text{IRGV} + \text{IRIV} + \text{IRDISV} + \text{IRXV}$$

'802: Nominal aggregate supply, billion Rials

$$\text{IRASV} = \text{IROUTPUTV} + \text{IRNITV} + \text{IRMV}$$

'803: Nominal aggregate output, billion Rials

$$\text{IROUTPUTV} = \text{IRINPUTV} + \text{IRGDPFV}$$

'804: Nominal aggregate input, billion Rials

$$\text{IRINPUTV} = \text{IRPINPUT} * \text{IRINPUT}$$

'805:Real gross national saving , billion Rials

$$\text{IRGNSV} = \text{IRIV} + \text{IRIIV} + \text{IRBOTV} + \text{IRNFYV}$$

'806:Real net national saving , billion Rials

$$\text{IRNNSV} = \text{IRGNSV} - \text{IRCCAV}$$

'807:Nominal export, billion Rials

$$\text{IRXV} = \text{IRXOILV} + \text{IRXNOILGV} + \text{IRXNFSV}$$

'808:Nominal import, billion Rials

$$\text{IRMV} = \text{IRMGV} + \text{IRMNFSV}$$

'809: Nominal balance of trade, billion Rials

$$\text{IRBOTV} = \text{IRXV} - \text{IRMV}$$

'810: Nominal gross domestic expenditure at market prices, billion Rials

$$\text{IRGDEM} = \text{IRCV} + \text{IRGV} + \text{IRIV} + \text{IRBOTV} + \text{IRDISV}$$

'811: Nominal private saving, billion Rials

$$\text{IRSPV} = \text{IRYDV} - \text{IRCV}$$

'812:Nominal capital stock, billion Rials

$$\text{IRKV} = \text{IRKV}(-1) * (1 + (\text{IRPI} - \text{IRPI}(-1)) / \text{IRPI}(-1)) + \text{IRIV} - \text{IRCCAV}$$

'813:Nominal gross domestic income at market price, billion Rials

$$\text{IRGDIMV} = \text{IRGDPMV}$$

'814:Nominal gross national income at market price, billion Rials

$$\text{IRGNIMV} = \text{IRGNPMV}$$

'815:Nominal net national income at factor cost, billion Rials

$$\text{IRNNIFV} = \text{IRGNIMV} - \text{IRCCAV} - \text{IRNITV}$$

'816:Nominal non-oil gross domestic product at market price, billion Rials

$$\text{IRGDPNFV} = \text{IRPGDPNF} * \text{IRGDPNF}$$

'817:Nominal gross national products at market price, billion Rials

$$\text{IRGNPMV} = \text{IRGDPMV} + \text{IRNFYV}$$

'818:Nominal gross domestic products at market price, billion Rials

$$\text{IRGDPMV} = \text{IRGDPNFV} + \text{IRVAOILV} + \text{IRNITV}$$

'819:Nominal disposable income, billion Rials

$$\text{IRYDV} = \text{IRGDPNFV} + \text{IRNFYV} - \text{IRCCAV} - \text{IRGRTDV}$$

'820:Nominal capital consumption allowances, billion Rials

$$\text{IRCCAV} = \text{IRCCA} * \text{IRPCCA}$$

'821:Nominal investment, billion Rials

$$\text{IRIV} = \text{IRIGV} + \text{IRIPV}$$

'822:Nominal discrepancies, billion Rials

$$\text{IRDISV} = \text{IRGDPMV} - (\text{IRCV} + \text{IRGV} + \text{IRIV} + \text{IRBOTV})$$

'823:Nominal net indirect taxes, billion Rials

$$\text{IRNITV} = \text{IRITV} - \text{IRSUBV}$$

'824:Nominal net factor income, billion Rials

$$\text{IRNFYV} = \text{IRXFYV} - \text{IRMFYV}$$

'825:Gross domestic product at factor cost, billion Rials

$$\text{IRGDPFV} = \text{IRGDPNFV} + \text{IRVAOILV}$$

'901:Nominal government consumption, billion Rials

$$\text{IRGV} = \text{IRGV}(-1) + 0.3229918912 * ((\text{IRGECV} + \text{IRGESV}) - (\text{IRGECV}(-1) - (\text{IRGESV}(-1)))) + 0.5408378805 * (\text{IRFEOAV} - \text{IRFEOAV}(-1))$$

'902:Nominal government investment, billion Rials

$$\text{IRIGV} = \text{IRIGV}(-1) + 1.042571928 * (\text{IRGEDV} - \text{IRGEDV}(-1)) + 0.6388608321 * (\text{IRFEOAV} - \text{IRFEOAV}(-1)) + 0.5346585315 * \text{IROLGV} - 8986.143478 * \text{IRD9497}$$

'903:Nominal subsidies, billion Rials

$$\text{IRSUBV} = \text{IRSUBV}(-1) + 0.0881223892 * (\text{IRGECV} + \text{IRGESV} - \text{IRGECV}(-1) - \text{IRGESV})$$

'904:Nominal private consumption, billion Rials

$$\text{IRCV} = \text{IRCV}(-1) + 0.5012817036 * (\text{IRYDV} - \text{IRYDV}(-1)) + 0.2191125548 * \text{IRSPV}(-1)$$

'905:Nominal value added of oil sector, billion Rials

IRVAOILV = IRVAOILV(-1) + 1.316292333 \* (IRXOILD / 1000 \* IREO - IRXOILD(-1) / 1000 \* IREO(-1)) + 0.465472825 \* (IRPDOIL \* (IRYOILB - IRXOILB) - IRPDOIL(-1) \* (IRYOILB(-1) - IRXOILB(-1)))

'906:Nominal import of goods, billion Rials

IRMGV = IRMGV(-1) + 0.001095825909 \* (IRMGD \* IREENOIL - IRMGD(-1) \* IREENOIL(-1))

@ADD IRMGV IRMGV\_A

'907:Nominal import of non-factor services, billion Rials

IRMNFSV = IRMNFSV(-1) + 0.00106809426 \* (IRMNFS \* IREENOIL - IRMNFS(-1) \* IREENOIL(-1))

@ADD IRMNFSV IRMNFSV\_A

'908:Nominal export of factor income from abroad, billion Rials

IRXFYV = IRXFYV(-1) + B(9081) \* (IRXFYSD \* IREENOIL - IRXFYSD(-1) \* IREENOIL(-1))

@ADD IRXFYV IRXFYV\_A

'909:Nominal import of factor income from abroad, billion Rials

IRMFYV = IRMFYV(-1) - 421.5743686 + 0.0005238481596 \* (IRMFYSD \* IREENOIL - IRMFYSD(-1) \* IREENOIL(-1)) + 2548.013391 \* IRD93 + 410.007844 \* IRD5992

@ADD IRMFYV IRMFYV\_A

'910:Nominal indirect taxes, billion Rials

IRITV = IRITV(-1) + 0.9372870902 \* (IRGRTIV - IRGRTIV(-1))

'911:Nominal private investment, billion Rials

IRIPV = IRIPV(-1) - 784.5955683 \* (IRIRL - IRIRL(-1)) - 224.9861376 \* (IRIRNB - IRIRNB(-1)) + 0.1135926146 \* (IROUTPUTV - IROUTPUTV(-1)) + IROLPV - 7979.126936 \* IRD99

'912:Nominal oil export, billion Rials

IRXOILV = IRXOILV(-1) + 0.001773887981 \* (IRXOILD \* IREO - IRXOILD(-1) \* IREO(-1)) - 24596.64395 \* IRD93 + 7663.479131 \* IRD9605

@ADD IRXOILV IRXOILV\_A

'913:Nominal non-oil goods export, billion Rials

IRXNOILGV = 0.001346645917 \* (IRXGNOD \* IREENOIL - IRXGNOD(-1) \* IREENOIL(-1)) + IRXNOILGV(-1)

@ADD IRXNOILGV IRXNOILGV\_A

'914:Nominal non-factor services export, billion Rials

IRXNFSV = IRXNFSV(-1) + 0.001065378732 \* (IRXNFS \* IREENOIL - IRXNFS(-1) \* IREENOIL(-1))

@ADD IRXNFSV IRXNFSV\_A

'915:Nominal changes in inventory, billion Rials

IRIIV = - 3.397896809 \* (IRIIV(-1) / IRINPUTV(-1)) \* (IRINPUTV - IRINPUTV(-1)) + IRIIV(-1) + 2.254392182 \* (IRIIV(-1) / IRGDPFV(-1)) \* (IRGDPFV - IRGDPFV(-1)) + 16772.31647 \* IRD9596 + 33386.68897 \* IRD00



## 'Price

'1001: Agregate price deflator

$$\text{IRPA} = \text{IRADV} / \text{IRAS}$$

'1002: Gross domestic product at factor cost price deflator

$$\text{IRPGDPF} = \text{IRGDPFV} / \text{IRGDPF}$$

'1003:Gross national saving price deflator

$$\text{IRPGNS} = \text{IRGNSV} / \text{IRGNS}$$

'1004:Net national saving price deflator

$$\text{IRPNNS} = \text{IRNNSV} / \text{IRNNS}$$

'1005:Import of goods price deflator

$$\text{IRPMG} = \text{IRMGV} / \text{IRMG}$$

'1006:Import of non factor services price deflator

$$\text{IRPMNFS} = \text{IRMNFSV} / \text{IRMNFS}$$

'1007:Export of oil price deflator

$$\text{IRPXOIL} = \text{IRXOILV} / \text{IRXOIL}$$

'1008:Export of non-oil goods price deflator

$$\text{IRPXNOILG} = \text{IRXNOILGV} / \text{IRXNOILG}$$

'1009:Export of non-factor services price deflator

$$\text{IRPXNFS} = \text{IRXNFSV} / \text{IRXNFS}$$

'1010: Balance of trade price deflator

$$\text{IRPBOT} = \text{IRBOTV} / \text{IRBOT}$$

'1011: Gross domestic expenditure at market prices price deflator

$$\text{IRPGDEM} = \text{IRGDEMV} / \text{IRGDEM}$$

'1012: Private saving price deflator

$$\text{IRPSP} = \text{IRSPV} / \text{IRSP}$$

'1013:Capital stock price deflator

$$\text{IRPK} = \text{IRKV} / \text{IRK}$$

'1014:Gross domestic product price deflator

$$\text{IRPGDPM} = \text{IRGDPMV} / \text{IRGDPM}$$

'1015:Private consumption price deflator

$$\text{IRPC} = \text{IRCV} / \text{IRC}$$

'1016:Government investment price deflator

$$\text{IRPIG} = \text{IRIGV} / \text{IRIG}$$

'1017:Private investment price deflator

$$\text{IRPIP} = \text{IRIPV} / \text{IRIP}$$

'1018:Government consumption price deflator  
 $IRPG = IRGV / IRG$

'1019:Net indirect taxes price deflator  
 $IRPNIT = IRNITV / IRNIT$

'1020:Import price deflator  
 $IRPM = IRMV / IRM$

'1021:Export price deflator  
 $IRPX = IRXV / IRX$

'1022:Net factor income from abroad price deflator  
 $IRPNFY = IRNFYV / IRNFY$

'1023:Export of factor income from abroad price deflator  
 $IRPXFY = IRXFYV / IRXFY$

'1024:Import of factor income from abroad price deflator  
 $IRPMFY = IRMFYV / IRMFY$

'1025:Oil value added price deflator  
 $IRPVAOIL = IRVAOILV / IRVAOIL$

'1026:Investment price deflator  
 $IRPI = IRIV / IRI$

'1027:Inflation rate for consumer price index  
 $IRINFCPI = (IRCPI - IRCPI(-1)) / IRCPI(-1)$

'1028:Inflation rate for whole sale price index  
 $IRINFWPI = (IRWPI - IRWPI(-1)) / IRWPI(-1)$

'1029:Gross national product price deflator  
 $IRPGNPM = IRGNPMV / IRGNPM$

'1030:Discrepancies price deflator  
 $IRPDIS = IRDISV / IRDIS$

'1031:Gross domestic income price deflator  
 $IRPGDIM = IRGDIMV / IRGDIM$

'1032:Gross national income price deflator  
 $IRPGNIM = IRGNIMV / IRGNIM$

'1033:Disposable income price deflator  
 $IRPYD = IRYDV / IRYD$

'1034:Net national income price deflator  
 $IRPNNIF = IRNNIFV / IRNNIF$

'1035:Non-oil gross domestic product price deflator

$$\text{IRPGDPNF} = (\text{IRCV} + \text{IRGV} + \text{IRIV} + \text{IRXV} - \text{IRMV} + \text{IRDISV} - \text{IRVAOILV} - \text{IRNITV}) / \text{IRGDPNF}$$

'1036: Inirect taxes price deflator  
 $\text{IRPIT} = \text{IRPGDPF}$

'1037: Subsidies price deflator  
 $\text{IRPSUB} = \text{IRPGDPF}$

'1038: Output price deflator  
 $\text{IROUTPUT} = \text{IROUTPUTV} / \text{IROUTPUT}$

'1039: Changes in inventory price deflator  
 $\text{IRPII} = \text{IRIIV} / \text{IRII}$

'2001:Market exchange rate, Rials/Dollar  
 $\text{IREM} = \text{IREM}(-1) + 0.05554102556 * (\text{IRM2V} - \text{IRM2V}(-1)) - 0.032592056 * \text{IRBOPD} - 0.07982924874 * \text{IRGRDSV} + 1935.571976 * \text{IRD99}$

'2002:Effective exchange rate for non-oil goods and services, Rials/Dollar  
 $\text{IREENOIL} = \text{IREO} * \text{IRD5978} + (1 - \text{IRD5978}) * (-151.8952115 + 0.2700343261 * \text{IREM} + (1 - 0.2700343261) * \text{IREO}) + 0.6907965579 * \text{IREENOIL}(-1) - 1138.423152 * \text{IRD9305}$

'2003:Whole sale price index for imported goods  
 $\text{IRWPIM} = \text{IRWPIM}(-1) + 53.05333812 * (((\text{IRMGD} / (\text{IRMGD} + \text{IRMNFSD})) * \text{IRPM}) - ((\text{IRMGD}(-1) / (\text{IRMGD}(-1) + \text{IRMNFSD}(-1)))) * \text{IRPM}(-1)))$

'2004:Whole sale price index for exported goods  
 $\text{IRWPIX} = \text{IRWPIX}(-1) + 317.0958218 * (((\text{IRXGNOD} / (\text{IRXGD} + \text{IRXNFSD})) * \text{IRPX}) - ((\text{IRXGNOD}(-1) / (\text{IRXGD}(-1) + \text{IRXNFSD}(-1)))) * \text{IRPX}(-1)))$

'2005:Whole sale price index for domestically produced and consumed goods  
 $\text{IRWPID} = \text{IRWPID}(-1) + 89.48087889 * (\text{IRPGDPNF} - \text{IRPGDPNF}(-1))$

'2006:Whole sale price index  
 $\text{IRWPI} = 0.6779166365 * \text{IRWPID} + 0.275025376 * \text{IRWPIM} + (1 - 0.6779166365 - 0.275025376) * \text{IRWPIX}$   
 @ADD IRWPI IRWPI\_A

'2007:Consumer price index  
 $\text{IRCPI} = \text{IRCPI}(-1) + 98.44418546 * (\text{IRPGDPNF} - \text{IRPGDPNF}(-1)) - 13.04530536 * \text{IRD00}$

'2008:Non-organized market interest rate  
 $\text{IRIRNB} = 11.84814018 + 0.4623262086 * \text{IRIRNB}(-1) + 0.0005869638485 * (\text{IRSPV} - \text{IRSPV}(-1)) + (\text{IRCPI} - \text{IRCPI}(-1)) / \text{IRCPI}(-1) + 9.500715126 * \text{IRD7905} - 7.701419601 * \text{IRD9699}$

'2009:Capital consumption allowances price deflator  
 $\text{IRPCCA} = \text{IRPCCA}(-1) + 0.9621447828 * (\text{IRPK} - \text{IRPK}(-1))$

'2010: Input price deflator  
 $\text{IRPINPUT} = \text{IRPINPUT}(-1) + 0.9033705087 * (\text{IRPGDPF} - \text{IRPGDPF}(-1))$

## 'Labor market

'3001:Wage index

$$\text{IRWIND} = \text{IRWINDPGDPM} * \text{IRPGDPM}$$

'3002:Active population, thousand persons

$$\text{IRPOPA} = \text{IRPOPAPOP} * \text{IRPOP}$$

'3003:Unemployment, thousand persons

$$\text{IRUNEMP} = \text{IRPOPA} - \text{IREMP}$$

'3004:Unemployment rate, percent

$$\text{IRUNEMPR} = \text{IRUNEMP} / \text{IRPOPA} * 100$$

'3101:Active population ratio

$$\text{IRPOPAPOP} = - 0.3601152327 + 1.108423381 * \text{IRPOPAPOP}(-1) + 0.0002424121927 * \text{IRYEAR} + 0.0002424121927 * \text{IRD66}$$

'3102:Population, thousand persons

$$\text{IRPOP} = 677.3139451 + 1.008876744 * \text{IRPOP}(-1)$$

'3103:Real wage index

$$\text{IRWINDPGDPM} = \text{IRWINDPGDPM}(-1) - 0.01057194595 * (\text{IREMP} - \text{IREMP}(-1)) + 0.0003847040952 * (\text{IRGDPM} - \text{IRGDPM}(-1)) + 13.98215093 * \text{IRD7579} + 16.55491964 * \text{IRD7880}$$

'3104:Employment, thousand persons

$$\text{IREMP} = \text{IREMP}(-1) + 12.60404329 * (\text{IRWIND} - \text{IRWIND}(-1)) + 0.01579531025 * \text{IRPOPA} + 678.333946 * \text{IRD66} + 370.3809978 * \text{IRD76}$$

## Evaluations for 1959-2002 ex-post simulation

No.	Actual	obs	Non 0 obs	Mean actual	Mean simulated	Mean error	VAR (error)
1	IRAD	42	42	352617	342047	-10570	4.85E+09
2	IRADV	42	42	131014	158320.1	27306	4.01E+09
3	IRAS	42	42	352617	342047	-10570	4.85E+09
4	IRASV	42	42	131014	158320.1	27306	4.01E+09
5	IRBOPD	42	42	365.424	1800.789	1435.4	6881906
6	IRBOPDC	42	42	4007.34	11007.33	7000	1.26E+08
7	IRBOPEOD	42	38	-298.54	-339.723	-41.183	273018.3
8	IRBOPEODC	42	42	-5284.3	-6206.482	-922.19	2078016
9	IRBOT	42	42	-4894.1	-4366.552	527.52	1.07E+08
10	IRBOTV	42	42	2552.17	-1226.232	-3778.4	56389535
11	IRC	42	42	89078	91945.66	2867.7	1.09E+08
12	IRCAD	42	42	1207.7	2684.25	1476.5	8500043
13	IRCADC	42	42	19839.3	27761.47	7922.2	1.24E+08
14	IRCCA	42	42	27823.9	28186.86	362.99	8159440
15	IRCCAV	42	42	11903.3	13334.24	1430.9	23574037
16	IRCP	42	42	26.5755	27.55313	0.9777	33.09777
17	IRCUV	42	42	4533.27	5797.327	1264.1	9116277
18	IRCUVPGDPM	42	42	17188.8	17874.42	685.61	5115067
19	IRCV	42	42	39242.6	43583.58	4341	3.29E+08
20	IRDDV	42	42	12867.6	16120.93	3253.3	69469780
21	IRDDVPGDPM	42	42	27209	29090.79	1881.8	21784269
22	IRDIS	42	42	15985	16022.54	37.534	1.14E+08
23	IRDISV	42	42	4704.13	12474.57	7770.4	1.42E+08
24	IREENOIL	42	42	839.086	1165.808	326.72	336224.3
25	IREM	42	42	1455.92	1843.606	387.68	1220770
26	IREMP	42	42	10516.2	10751.18	234.96	192234.2
27	IRFYSBD	42	42	-587.67	-514.5295	73.143	148982.8
28	IRFYSBDC	42	42	-10102	-8551.762	1550.5	1333032
29	IRG	42	42	31529.9	33686.94	2157	17542257
30	IRGBDV	42	42	-1072.9	1763.785	2836.7	27389213
31	IRGBDVC	42	42	8896.51	-5378.382	-14275	8.52E+08
32	IRGDEM	42	42	192621	199534.5	6913	3.12E+08
33	IRGDEM	42	42	78821.6	93297.99	14476	1.3E+09
34	IRGDIM	42	42	199976	189673.2	-10303	2.1E+09
35	IRGDIMV	42	42	78821.6	93297.99	14476	1.3E+09
36	IRGDPF	42	42	188208	195822.7	7614.4	2.4E+08
37	IRGDPFV	42	42	78331.3	91972.37	13641	1.19E+09
38	IRGDPM	42	42	192621	199534.5	6913	3.12E+08
39	IRGDPMV	42	42	78821.6	93297.99	14476	1.3E+09
40	IRGDPNF	42	42	146771	153484.3	6712.9	1.92E+08
41	IRGDPNFV	42	42	66554.4	77927.7	11373	1.24E+09
42	IRGEFIDC	42	29	4982.32	4982.323	0.0001	0
43	IRGESV	42	42	1981.92	3175.654	1193.7	5062830
44	IRGEV	42	42	18392.9	19586.59	1193.7	5062831
45	IRGNIM	42	42	199772	189808.3	-9963.2	2.13E+09
46	IRGNIMV	42	42	78678.5	92949.77	14271	1.25E+09
47	IRGNPM	42	42	192417	199669.6	7253	3.08E+08
48	IRGNPMV	42	42	78678.5	92949.77	14271	1.25E+09
49	IRGNS	42	42	73773.1	59189.43	-14584	1.82E+09
50	IRGNSV	42	42	27657.1	25974.78	-1682.3	53007688
51	IRGRMV	42	42	2084.9	3334.859	1250	4818815

52	IRGROILV	42	42	5347.31	5771.314	424	871288.6
53	IRGRSV	42	42	1981.92	3175.654	1193.7	5062830
54	IRGRTDV	42	42	2718.56	2963.224	244.66	531643.8
55	IRGRTIV	42	42	1623.81	2541.914	918.1	3228242
56	IRGRTV	42	42	4342.37	5505.138	1162.8	5579727
57	IRGRV	42	42	17319.9	21350.38	4030.5	54145609
58	IRGV	42	42	11143.5	14651.14	3507.6	70325796
59	IRI	42	42	60922.7	62245.94	1323.2	1.32E+08
60	IRIG	42	42	21322	21389.21	67.17	4413691
61	IRIGV	42	42	7696.63	7563.405	-133.22	6133453
62	IRII	42	42	10594.4	11036.27	441.85	75004512
63	IRIIV	42	42	4068.8	3734.311	-334.49	8225264
64	IRINFCPI	42	40	0.14181	0.15844	0.0166	0.04467
65	IRINFWPI	42	37	0.14629	0.15459	0.0083	0.02205
66	IRINPUT	42	42	101339	99770.21	-1568.6	3.07E+08
67	IRINPUTV	42	42	38878.7	42370.33	3491.6	1.01E+08
68	IRIP	42	42	39600.7	40856.74	1256.1	1.02E+08
69	IRIPV	42	42	13482.6	16251.52	2768.9	99841757
70	IRIRNB	42	42	32.7752	34.01741	1.2423	24.7404
71	IRIT	42	42	7444.99	6491.75	-953.24	6322176
72	IRITV	42	42	1931.84	2410.358	478.52	1610179
73	IRIV	42	42	21179.3	23814.93	2635.7	78165036
74	IRK	42	42	659972	671279.1	11308	5.63E+09
75	IRKADC	42	42	-10548	-10547.66	0	0
76	IRKV	42	42	322929	362557.9	39629	2.09E+10
77	IRM	42	42	51302.2	52603.53	1301.3	1.9E+08
78	IRM2NFAD	42	42	4683.15	11158.51	6475.4	1.1E+08
79	IRM2NFAV	42	42	1725.5	10255.55	8530.1	3.5E+08
80	IRM2NGGV	42	42	30259.7	15984.84	-14275	8.52E+08
81	IRM2NGSV	42	42	-14725	-14877.09	-152.1	4453914
82	IRM2NGSVPGDPM	42	42	-41429	-40387.17	1041.5	31652706
83	IRM2NGV	42	42	15534.7	1107.747	-14427	9.04E+08
84	IRM2NPV	42	42	24557.7	36740.17	12182	5.77E+08
85	IRM2NPVPGDPM	42	42	61206.9	73301.33	12094	5.64E+08
86	IRM2NWV	42	42	-4454.2	542.7632	4997	2.43E+08
87	IRM2V	42	42	37363.7	48646.24	11283	7.25E+08
88	IRMFY	42	42	4410.04	4275.06	-134.98	1104295
89	IRMFYSD	42	42	1471.91	1434.177	-37.737	129622.1
90	IRMFYV	42	42	788.297	1117.355	329.06	574484.6
91	IRMG	42	42	46515.8	48234.07	1718.3	1.19E+08
92	IRMGD	42	42	10646.1	11351.08	704.95	9454785
93	IRMGDCIFP	42	42	121.997	126.3939	4.3969	781.6177
94	IRMGV	42	42	11768.8	19161.16	7392.3	2.06E+08
95	IRMNFS	42	42	4786.4	4369.465	-416.93	26287623
96	IRMNFSBDC	42	42	1129.98	1420.113	290.13	1122385
97	IRMNFSDCIFP	42	42	12.397	11.50855	-0.8885	191.7882
98	IRMNFSV	42	42	1544.62	3490.618	1946	20424507
99	IRMSD	42	42	2601.89	2854.29	252.4	1308089
100	IRMV	42	42	13313.5	22651.77	9338.3	3.51E+08
101	IRNFSBD	42	42	-863.99	-884.1443	-20.159	716369.6
102	IRNFSBDC	42	42	-11943	-14705.33	-2762	41440852
103	IRNFY	42	42	-204.88	135.0687	339.95	2305892
104	IRNFYV	42	42	-143.13	-348.2259	-205.1	496808.8
105	IRNIT	42	42	4413.25	3711.842	-701.4	12527539
106	IRNITV	42	42	490.38	1325.628	835.25	3622951

107	IRNNIF	42	42	167534	157909.6	-9624.8	1.98E+09
108	IRNNIFV	42	42	66284.8	78289.89	12005	9.09E+08
109	IRNNS	42	42	45949.2	31002.57	-14947	1.73E+09
110	IRNNSV	42	42	15753.8	12640.53	-3113.2	31699902
111	IRNTRD	42	30	355.148	1753.775	1398.6	4617877
112	IRNTRDC	42	40	3385.79	12590.55	9204.8	2.94E+08
113	IROLV	42	22	2541.99	2541.989	0	0
114	IROLVC	42	22	16254.2	16254.17	0.0024	0.00012
115	IROUTPUT	42	42	289547	295592.9	6045.8	9.51E+08
116	IROUTPUTV	42	42	117210	134342.7	17133	1.96E+09
117	IRPA	42	42	0.266	0.29255	0.0266	0.00326
118	IRPBOT	42	42	0.35227	2.18064	1.8284	180.7052
119	IRPC	42	42	0.27293	0.27197	-0.001	0.00344
120	IRPCCA	42	42	0.2483	0.23346	-0.0148	0.00354
121	IRPDIS	42	42	0.33174	0.26477	-0.067	12.98524
122	IRPG	42	42	0.28315	0.33093	0.0478	0.024
123	IRPGDEM	42	42	0.2706	0.28767	0.0171	0.00179
124	IRPGDIM	42	42	0.26766	0.29661	0.029	0.00342
125	IRPGDPF	42	42	0.2706	0.28767	0.0171	0.00179
126	IRPGDPM	42	42	0.2706	0.28767	0.0171	0.00179
127	IRPGDPNF	42	42	0.26897	0.28435	0.0154	0.00388
128	IRPGNIM	42	42	0.26779	0.29624	0.0285	0.00338
129	IRPGNPM	42	42	0.27072	0.28739	0.0167	0.00176
130	IRPGNS	42	42	0.25071	0.20747	-0.0432	0.034
131	IRPI	42	42	0.24676	0.2318	-0.015	0.00514
132	IRPIG	42	42	0.25191	0.24218	-0.0097	0.00697
133	IRPII	42	42	0.20293	0.28227	0.0793	0.12411
134	IRPINPUT	42	42	0.26519	0.26048	-0.0047	0.00083
135	IRPIP	42	42	0.24487	0.23111	-0.0138	0.01616
136	IRPIT	42	42	0.27059	0.28767	0.0171	0.00179
137	IRPK	42	42	0.26392	0.24542	-0.0185	0.00506
138	IRPM	42	42	0.2688	0.37152	0.1027	0.04703
139	IRPMFY	42	42	0.22212	0.32116	0.099	0.03908
140	IRPMG	42	42	0.27065	0.37837	0.1077	0.05474
141	IRPMNFS	42	42	0.25633	0.35077	0.0944	0.02791
142	IRPNFY	42	42	0.10663	0.91963	0.813	16.57255
143	IRPNIT	42	42	0.27059	0.28768	0.0171	0.00179
144	IRPNNIF	42	42	0.27184	0.30844	0.0366	0.00431
145	IRPNNS	42	42	0.2583	-0.42631	-0.6846	21.5088
146	IRPOP	42	42	41884.5	40980.41	-904.07	8319635
147	IRPOPA	42	42	11702.2	11975.29	273.05	739314.5
148	IRPOPAPOP	42	42	0.28236	0.28771	0.0053	0.00088
149	IRPOUTPUT	42	42	0.26871	0.27847	0.0098	0.00107
150	IRPSP	42	42	0.27128	0.35891	0.0876	0.05715
151	IRPSUB	42	42	0.2706	0.28767	0.0171	0.00179
152	IRPVAOIL	42	42	0.28858	0.30718	0.0186	0.02146
153	IRPX	42	42	0.28787	0.32468	0.0368	0.00711
154	IRPXFY	42	42	0.24882	0.31427	0.0655	0.02174
155	IRPXNFS	42	42	0.27109	0.50713	0.236	0.19066
156	IRPXNOILG	42	42	0.316	0.39248	0.0765	0.03521
157	IRPXOIL	42	42	0.28235	0.28664	0.0043	0.00087
158	IRPYD	42	42	0.2747	0.29482	0.0201	0.00597
159	IRSD	42	42	-1451.7	-1398.674	52.983	758498.4
160	IRSDC	42	42	-22046	-23257.1	-1211.5	33948140
161	IRSDV	42	42	19962.8	26727.98	6765.1	2.48E+08

162	IRSDVPGDPM	42	42	47919.5	51576.76	3657.2	1.08E+08
163	IRSP	42	42	23426.6	27060.22	3633.6	63399627
164	IRSPV	42	42	12546.7	17698.42	5151.7	1.8E+08
165	IRSUB	42	42	3031.74	2779.908	-251.83	1975269
166	IRSUBV	42	42	1441.45	1084.728	-356.72	571167.7
167	IRTBD	42	42	2304.21	2329.149	24.937	5711554
168	IRTBDC	42	42	38499.1	38428.02	-71.115	34660658
169	IRTOT	42	41	7354.9	-9861.304	-17216	1.64E+09
170	IRUNEMP	42	42	1186.01	1224.103	38.09	338579.2
171	IRUNEMPR	42	42	9.32508	8.50138	-0.8237	14.74572
172	IRVAOIL	42	42	41436.9	42338.43	901.54	5492935
173	IRVAOILV	42	42	11776.9	14044.66	2267.8	40418448
174	IRWIND	42	42	24.571	40.39142	15.82	1089.137
175	IRWINDPGDPM	42	42	83.2127	101.9492	18.736	787.7573
176	IRWPI	42	42	25.9133	23.03375	-2.8796	54.1543
177	IRWPID	42	42	26.2343	25.44329	-0.791	32.34533
178	IRWPIM	42	42	24.1881	18.07273	-6.1154	172.422
179	IRWPIX	42	42	31.3998	17.34326	-14.057	794.3816
180	IRX	42	42	46408.1	48236.98	1828.9	40616049
181	IRXFY	42	42	4205.16	4410.128	204.97	1145391
182	IRXFYSD	42	42	884.242	919.6479	35.406	69080.03
183	IRXFYV	42	42	645.168	769.1289	123.96	179077.9
184	IRXGD	42	42	12950.3	13680.23	729.89	2706069
185	IRXGNOD	42	42	1287.98	1543.548	255.57	301109.8
186	IRXGNODOP	42	42	15.505	16.15845	0.6534	59.53793
187	IRXNFS	42	42	1016.45	1430.423	413.97	474022.9
188	IRXNFSD	42	42	265.993	535.9687	269.98	181669.8
189	IRXNFSDOP	42	42	3.82205	6.41633	2.5943	18.61658
190	IRXNFV	42	42	810.754	2273.774	1463	14515029
191	IRXNOILG	42	42	6392.52	6729.34	336.82	15819989
192	IRXNOILGV	42	42	4413.64	6775.693	2362.1	27849415
193	IRXOIL	42	42	38999.1	40077.22	1078.1	8007917
194	IRXOILB	42	42	925.82	953.1487	27.328	5145.704
195	IRXOILD	42	42	11662.4	12136.69	474.32	1858323
196	IRXOILV	42	42	10641.2	12376.08	1734.8	12908870
197	IRXSD	42	42	1150.24	1455.617	305.38	244609.7
198	IRXV	42	42	15865.6	21425.54	5559.9	1.51E+08
199	IRYD	42	42	112505	119005.9	6501.3	1.41E+08
200	IRYDV	42	42	51789.3	61282.01	9492.7	9.38E+08



No.	Actual	SDV (error)	Median (error)	Max (error)	Min (error)	Skew (error)
1	IRAD	69608.54	-15295.97	108586	-180406	-0.642
2	IRADV	63317.15	1506.233	271985	-2877.8	2.843
3	IRAS	69608.54	-15295.97	108586	-180406	-0.642
4	IRASV	63317.14	1506.233	271985	-2877.8	2.843
5	IRBOPD	2623.339	350.551	7616.68	-3942.6	0.820
6	IRBOPDC	11203.82	3350.046	46663.7	-4450.5	2.025
7	IRBOPEOD	522.5116	-1.60087	1523.66	-1062.2	0.829
8	IRBOPEODC	1441.533	-172.145	1120.95	-3564.6	-0.629
9	IRBOT	10366.61	933.6997	31001.8	-32944	-0.330
10	IRBOTV	7509.297	-1418.824	1732.12	-40321	-3.193
11	IRC	10443.29	854.3924	29738.5	-20464	0.365
12	IRCAD	2915.483	352.1519	8345.47	-4037.7	0.739
13	IRCADC	11156.13	3706.171	48447	-2080.1	2.142
14	IRCCA	2856.473	116.077	7298.09	-3965.5	0.760
15	IRCCAV	4855.31	-339.4918	16989.8	-3884.7	2.036
16	IRCPPI	5.75307	0.14801	31.1163	-6.5414	3.753
17	IRCUV	3019.317	17.46348	13434	-312.34	2.644
18	IRCUVPGDPM	2261.651	150.0607	4944.8	-3792.1	0.256
19	IRCV	18142.36	384.5495	95141.1	-8642	3.990
20	IRDDV	8334.853	69.75	35001.9	-666.73	2.917
21	IRDDVPGDPM	4667.362	458.3191	14431.5	-6476.4	0.816
22	IRDIS	10667.81	0	19287.9	-23892	-0.255
23	IRDISV	11916.84	3648.164	60977	-1045.8	2.670
24	IREENOIL	579.8485	155.6865	2630.83	-117.98	2.484
25	IREM	1104.885	-8.69093	4347.91	-679.41	2.492
26	IREMP	438.4452	158.132	1951.93	-466.1	2.444
27	IRFYSBD	385.9828	124.9912	941.382	-966.56	-0.786
28	IRFYSBDC	1154.57	1034.654	3784.12	0	0.566
29	IRG	4188.348	679.0854	11856.9	-4035.6	0.874
30	IRGBDV	5233.47	134.1957	21779	-198.94	1.941
31	IRGBDVC	29196.31	-742.0119	303.835	-117180	-2.130
32	IRGDEM	17656.94	0	51184.1	-15566	0.862
33	IRGDEM V	35987.62	729.148	161848	-2851.4	2.956
34	IRGDIM	45775.92	-10658.44	93685.7	-116273	-0.392
35	IRGDIM V	35987.62	729.148	161848	-2851.4	2.956
36	IRGDPF	15499.57	2688.069	47574	-13946	0.797
37	IRGDPFV	34538.81	689.459	158218	-2477.9	3.036
38	IRGDPM	17656.94	0	51184.1	-15566	0.862
39	IRGDPM V	35987.62	729.148	161848	-2851.4	2.956
40	IRGDPNF	13839.38	3209.039	42720.9	-14020	0.680
41	IRGDPNFV	35199.35	331.693	170612	-2456.3	3.455
42	IRGEFIDC	0.00014	0.00022	0.0003	-0.0004	-1.213
43	IRGESV	2250.073	65.487	8656.11	-21.776	1.918
44	IRGEV	2250.074	65.487	8656.1	-21.776	1.918
45	IRGNIM	46189.65	-10042.92	93570.1	-114270	-0.433
46	IRGNIM V	35387.43	634.0387	157825	-2839.1	2.943
47	IRGNPM	17559.47	0	51046.2	-18717	0.794
48	IRGNPM V	35387.43	634.0387	157825	-2839.1	2.943
49	IRGNS	42708.39	-11261.74	114418	-114895	0.050
50	IRGNSV	7280.638	-1457.4	19924.5	-20296	0.369
51	IRGRMV	2195.18	103.6481	9536.44	-4.949	1.997
52	IRGROILV	933.4284	2.01721	3389.25	-145.52	1.919
53	IRGRSV	2250.073	65.4871	8656.11	-21.776	1.918
54	IRGRTDV	729.1391	20.68666	3341.71	-625.18	3.045

55	IRGRTIV	1796.731	23.99442	6656.53	-149.15	1.879
56	IRGRTV	2362.145	44.8396	9546.8	-197.92	2.346
57	IRGRV	7358.37	192.3128	27937.4	-220.72	1.810
58	IRGV	8386.048	98.41781	32421.8	-251.61	2.365
59	IRI	11480.72	-2883.722	28809.1	-20263	0.677
60	IRIG	2100.879	-238.7355	4935.45	-3898.7	0.365
61	IRIGV	2476.581	6.12137	2753.66	-11862	-3.424
62	IRII	8660.515	-285.43	24121.4	-19091	0.351
63	IRIIV	2867.972	-1.20054	5110.1	-11359	-2.094
64	IRINFCPI	0.21134	0.02048	0.71623	-0.4706	0.439
65	IRINFWPI	0.14849	-0.00864	0.49043	-0.362	0.406
66	IRINPUT	17513.59	-4001.943	25146.9	-43691	-0.605
67	IRINPUTV	10028.68	170.5308	48935.9	-2483.5	3.355
68	IRIP	10078.81	-1752.746	24827.3	-16824	0.569
69	IRIPV	9992.085	-1032.701	30515.5	-7876.5	1.637
70	IRIRNB	4.97397	1.01711	22.4652	-9.3212	1.548
71	IRIT	2514.394	-1846.924	4356.79	-4598.7	0.392
72	IRITV	1268.928	6.00461	6044.66	-886.2	2.525
73	IRIV	8841.099	-565.837	22598.1	-6709.5	1.403
74	IRK	75027.94	-3343.102	163252	-109423	0.680
75	IRKADC	0	0	0	0	2.913
76	IRKV	144736.5	-4341.681	700950	-114544	2.882
77	IRM	13779.28	-2801.619	41897.7	-34586	0.751
78	IRM2NFAD	10478.32	2649.58	44436.9	-3614.8	2.081
79	IRM2NFAV	18702.72	241.1253	77875.6	-331.55	2.396
80	IRM2NGGV	29196.31	-742.0119	303.84	-117180	-2.130
81	IRM2NGSV	2110.43	-49.83421	3802.84	-9477	-2.204
82	IRM2NGSVPGDPM	5626.074	0	16485.9	-7632.2	0.832
83	IRM2NGV	30073.96	-854.8265	1938.76	-122549	-2.188
84	IRM2NPV	24018.54	283.159	84721.9	-265.23	1.896
85	IRM2NPVPGDPM	23750.87	3785.609	55904.3	-24650	0.178
86	IRM2NWV	15601.66	254.2183	78759.1	-3812.7	3.381
87	IRM2V	26932.46	96.835	108232	-2157.2	2.599
88	IRMFY	1050.855	-104.394	2673.53	-3823.6	-0.717
89	IRMFYSD	360.0307	-17.37723	734.756	-1385.3	-0.819
90	IRMFYV	757.9476	71.00316	3433.98	-313.09	2.736
91	IRMG	10925.61	-55.80474	35317.6	-21105	0.954
92	IRMGD	3074.863	-14.6765	11107	-5572	1.543
93	IRMGDCIFP	27.95743	-0.14281	90.3739	-54.007	0.954
94	IRMGV	14368.93	1492.366	67837.2	-2004.9	2.465
95	IRMNFS	5127.146	-102.6071	9994.44	-13481	-0.177
96	IRMNFS	1059.427	16.958	2713.41	-2186.6	0.171
97	IRMNFSDCIFP	13.84876	0.14038	25.1708	-35.612	-0.253
98	IRMNFSV	4519.348	0	18145.9	-326.49	2.544
99	IRMSD	1143.717	0	2461.06	-2947.2	-0.169
100	IRMV	18735.42	1505.523	85983.1	-2096.5	2.453
101	IRNFSBD	846.3862	132.7499	1996.29	-2598.1	-0.811
102	IRNFSBDC	6437.457	-2437.118	10423.6	-11326	0.233
103	IRNFY	1518.516	526.2967	2716.03	-4812.7	-1.712
104	IRNFYV	704.8467	-8.1721	548.086	-4023	-4.124
105	IRNIT	3539.426	-1583.557	7791.77	-5407.8	0.640
106	IRNITV	1903.405	0.96093	7129.85	-450	1.783
107	IRNNIF	44495.41	-6880.317	97364.7	-111203	-0.462
108	IRNNIFV	30142.09	1217.732	137205	-1643.3	3.165
109	IRNNS	41588.47	-11668.09	114464	-113408	0.161

110	IRNNSV	5630.267	-1898.234	5823.71	-25963	-2.045
111	IRNTRD	2148.925	1.6569	5371.11	-7.828	0.917
112	IRNTRDC	17153.56	4.4183	58763.6	-21.214	1.709
113	IROLV	0	0	0	0	-6.172
114	IROLVC	0.01078	0	0.05	0	4.198
115	IROUTPUT	30844.35	-495.4133	68349.6	-50457	0.220
116	IROUTPUTV	44324.84	751.9731	207154	-3658.3	3.130
117	IRPA	0.05709	0.01113	0.30559	-0.0124	3.416
118	IRPBOT	13.44266	-0.00102	86.6385	-5.7484	6.117
119	IRPC	0.05867	0.00374	0.18595	-0.1473	0.227
120	IRPCCA	0.05949	-0.02749	0.18742	-0.1103	1.468
121	IRPDIS	3.6035	0.16487	8.93341	-20.801	-4.248
122	IRPG	0.15493	0.00339	0.82836	-0.0793	3.573
123	IRPGDEM	0.04231	0.00506	0.21266	-0.0143	3.170
124	IRPGDIM	0.05846	0.01243	0.30168	-0.0138	3.130
125	IRPGDPF	0.04231	0.00505	0.21266	-0.0143	3.170
126	IRPGDPM	0.04231	0.00506	0.21266	-0.0143	3.170
127	IRPGDPNF	0.06227	0.00304	0.31915	-0.0645	3.354
128	IRPGNIM	0.05817	0.01229	0.30148	-0.0136	3.160
129	IRPGNPM	0.04198	0.00469	0.21219	-0.0151	3.195
130	IRPGNS	0.18439	-0.0577	0.55745	-0.4569	1.197
131	IRPI	0.07168	-0.0298	0.28842	-0.1144	2.324
132	IRPIG	0.08347	0.0049	0.13551	-0.3554	-2.475
133	IRPII	0.35229	-0.00362	1.92179	-0.4836	3.607
134	IRPINPUT	0.02874	0.0023	0.09144	-0.0902	-0.623
135	IRPIP	0.1271	-0.04833	0.55381	-0.1825	2.568
136	IRPIT	0.0423	0.00518	0.21266	-0.0143	3.170
137	IRPK	0.07111	-0.03088	0.28629	-0.1156	2.313
138	IRPM	0.21687	0.02129	1.0807	-0.0311	2.864
139	IRPMFY	0.19769	0.01708	0.79881	-0.0242	2.401
140	IRPMG	0.23396	0.02225	1.19724	-0.0314	3.037
141	IRPMNFS	0.16706	0.01819	0.71932	-0.0295	2.160
142	IRPNFY	4.07094	0	26.171	-0.8885	5.899
143	IRPNIT	0.0423	0.00519	0.21266	-0.0143	3.171
144	IRPNNIF	0.06561	0.01854	0.34796	-0.014	3.208
145	IRPNNS	4.63776	0	0.7432	-29.949	-6.122
146	IRPOP	2884.378	-1191.89	3334.42	-5059.1	0.060
147	IRPOPA	859.834	-65.861	3052	-888.77	1.636
148	IRPOPAPOP	0.02962	0.00395	0.06047	-0.0485	-0.073
149	IRPOUTPUT	0.0327	0.0031	0.17228	-0.034	3.393
150	IRPSP	0.23906	0.01053	0.99751	-0.2421	2.032
151	IRPSUB	0.04231	0.00505	0.21266	-0.0143	3.170
152	IRPVAOIL	0.14649	0.00485	0.31358	-0.5823	-1.271
153	IRPX	0.08431	0.00138	0.36776	-0.0303	2.471
154	IRPXFY	0.14746	0.01164	0.62201	-0.1031	2.379
155	IRPXNFS	0.43665	0.03549	1.70635	-0.0591	2.203
156	IRPXNOILG	0.18765	0.00287	0.95778	-0.0228	3.108
157	IRPXOIL	0.02951	-0.00001	0.0882	-0.1212	-0.840
158	IRPYD	0.07726	0.0075	0.37933	-0.1013	2.906
159	IRSD	870.9182	157.8512	2178.31	-2256.1	-0.514
160	IRSBDC	5826.503	-1929.15	11458.3	-9233	0.400
161	IRSDV	15751.99	37.96113	61794.4	-1288.9	2.445
162	IRSDVPGDPM	10384.71	-476.4112	28144.4	-11308	1.205
163	IRSP	7962.388	5081.285	17512.3	-13311	-0.036
164	IRSPV	13423.2	320.5248	52857	-2850.1	3.011

165	IRSUB	1405.443	-9.40486	1942.58	-3952	-0.723
166	IRSUBV	755.7564	2.14942	193.339	-2482.2	-1.711
167	IRTB	2389.886	-52.3127	4707.51	-8162.4	-1.010
168	IRTBDC	5887.33	-116.7332	9484.02	-14968	-0.668
169	IRTOT	40441.88	-12754.96	100274	-111951	0.034
170	IRUNEMP	581.8756	-171.4103	1276.68	-921.22	0.739
171	IRUNEMPR	3.84002	-1.3249	6.08536	-9.563	-0.021
172	IRVAOIL	2343.701	0	6623.83	-2464.8	0.981
173	IRVAOILV	6357.55	168.2793	18111.4	-12394	1.269
174	IRWIND	33.00208	0.53188	140.217	-0.3074	2.524
175	IRWINDPGDPM	28.06701	13.6769	63.1035	-20.334	0.146
176	IRWPI	7.35896	0	10.3924	-24.088	-1.649
177	IRWPID	5.6873	0.17817	22.7779	-15.92	0.562
178	IRWPIM	13.13095	0.1824	1.71923	-41.912	-1.787
179	IRWPIX	28.18478	-0.41754	0.3287	-124.09	-2.545
180	IRX	6373.072	153.8278	14980.2	-9535.3	0.467
181	IRXFY	1070.229	264.5358	2281.49	-3108.5	-0.925
182	IRXFYSD	262.8308	69.8626	520.3	-751.18	-0.672
183	IRXFYV	423.176	23.90678	2006.94	-1352.6	1.341
184	IRXGD	1645.013	-51.011	4701.31	-1666.3	0.963
185	IRXGNOD	548.7347	69.9051	1536.57	-570.56	0.467
186	IRXGNODOP	7.71608	1.17685	14.8461	-16.117	-0.180
187	IRXNFS	688.4932	220.691	2301.62	-872.94	0.813
188	IRXNFSD	426.2274	51.7697	1517.4	-324.95	1.261
189	IRXNFSDOP	4.31469	1.38304	14.4239	-5.4706	0.813
190	IRXNFSV	3809.859	32.27618	17109.6	-6.6514	3.071
191	IRXNOILG	3977.435	606.636	7652.74	-8308.1	-0.180
192	IRXNOILGV	5277.254	36.75679	20037.1	-81.476	2.242
193	IRXOIL	2829.826	0	7991.71	-2963.9	0.994
194	IRXOILB	71.73356	0	202.583	-75.132	0.994
195	IRXOILD	1363.203	0	3966.93	-2148.4	0.716
196	IRXOILV	3592.892	0	12332.1	-314.12	1.740
197	IRXSD	494.5804	163.5171	1618.88	-768.87	0.454
198	IRXV	12295.99	20.26664	47891	-364.41	2.342
199	IRYD	11878.73	5289.691	34385.1	-18209	0.231
200	IRYDV	30619.63	575.9982	146258	-8602	3.504

No.	Actual	Kurtosis (error)	RMS Error	Mean % error	RMS % error	Mean abs error	MA % error
1	IRAD	3.149	69582	-0.071	0.194	53148.82	0.167
2	IRADV	10.329	68259	0.345	0.523	27795.84	0.376
3	IRAS	3.149	69582	-0.071	0.194	53148.82	0.167
4	IRASV	10.329	68259	0.345	0.523	27795.83	0.376
5	IRBOPD	3.275	2962.8	NA	NA	1938.736	NA
6	IRBOPDC	6.686	13097	NA	NA	7752.66	NA
7	IRBOPEOD	4.444	517.89	NA	NA	335.5199	NA
8	IRBOPEODC	1.923	1696.8	NA	NA	1142.461	NA
9	IRBOT	5.613	10256	NA	NA	6858.135	NA
10	IRBOTV	14.537	8326.1	NA	NA	3996.316	NA
11	IRC	3.205	10709	0.011	0.092	7568.52	0.073
12	IRCAD	3.194	3237	NA	NA	2197.575	NA
13	IRCADC	7.113	13574	NA	NA	8104.387	NA
14	IRCCA	2.976	2845.5	-0.010	0.165	2091.884	0.117
15	IRCCAV	6.027	5006	-3.390	5.890	2505.813	3.474
16	IRCPI	19.216	5.7676	0.182	0.477	2.48702	0.303
17	IRCUV	9.238	3239.9	0.338	0.567	1313.334	0.366
18	IRCUVPGDPM	2.157	2337.4	0.011	0.187	1819.602	0.150
19	IRCV	18.422	18443	0.519	0.919	5877.026	0.579
20	IRDDV	10.432	8854.4	0.446	0.730	3391.706	0.499
21	IRDDVPGDPM	3.415	4980.6	0.056	0.133	3317.155	0.104
22	IRDIS	2.599	10540	NA	NA	8325.456	NA
23	IRDISV	11.002	14107	NA	NA	7878.36	NA
24	IREENOIL	8.514	659.52	0.984	1.455	342.8541	1.116
25	IREM	8.523	1158.4	-0.753	2.188	553.9173	1.128
26	IREMP	9.673	492.81	0.019	0.033	285.2757	0.023
27	IRFYSBD	3.988	388.31	NA	NA	295.1375	NA
28	IRFYSBDC	2.056	1924.9	NA	NA	1550.523	NA
29	IRG	2.704	4666.6	0.007	0.167	3340.685	0.131
30	IRGBDV	6.019	5897.8	NA	NA	2856.857	NA
31	IRGBDVC	6.434	32185	NA	NA	14318.99	NA
32	IRGDEM	2.590	18765	0.010	0.083	13449.64	0.067
33	IRGDEM V	10.853	38391	0.356	0.584	14798.4	0.378
34	IRGDIM	3.208	46386	-0.100	0.246	33837.87	0.195
35	IRGDIM V	10.853	38391	0.356	0.584	14798.39	0.378
36	IRGDPF	2.730	17103	0.018	0.077	12552.74	0.065
37	IRGDPF V	11.333	36751	0.373	0.614	13893.08	0.390
38	IRGDPM	2.590	18765	0.010	0.083	13449.64	0.067
39	IRGDPM V	10.853	38391	0.356	0.584	14798.39	0.378
40	IRGDPNF	2.708	15233	0.013	0.098	11515.27	0.084
41	IRGDPNF V	14.013	36590	0.292	0.548	11772.85	0.338
42	IRGEFIDC	4.977	0.0002	NA	NA	0.00014	NA
43	IRGESV	5.506	2523.3	1.865	3.129	1196.195	1.889
44	IRGEV	5.506	2523.3	0.093	0.126	1196.195	0.095
45	IRGNIM	3.247	46711	-0.095	0.242	33727.59	0.191
46	IRGNIM V	10.748	37764	0.362	0.598	14595.32	0.385
47	IRGNPM	2.572	18804	0.015	0.081	13432.97	0.065
48	IRGNPM V	10.748	37764	0.362	0.598	14595.32	0.385
49	IRGNS	4.779	44646	-0.227	0.658	29783.37	0.475
50	IRGNSV	5.514	7387.5	-2.799	4.319	4600.458	2.863
51	IRGRMV	6.512	2503.3	1.637	2.169	1250.322	1.656
52	IRGROILV	5.239	1015	0.033	0.072	444.4493	0.055
53	IRGRSV	5.506	2523.3	1.865	3.129	1196.195	1.889
54	IRGRTDV	12.373	760.82	0.531	0.935	324.7449	0.591

55	IRGRTIV	5.261	1998.6		0.460	0.737	949.7749	0.556
56	IRGRTV	7.908	2607.5		0.374	0.519	1191.426	0.411
57	IRGRV	5.166	8312.7		0.366	0.490	4050.278	0.375
58	IRGV	7.126	8997.5		0.364	0.548	3557.339	0.388
59	IRI	2.681	11420		-0.032	0.225	9051.932	0.182
60	IRIG	2.897	2076.8		-0.067	0.174	1592.893	0.125
61	IRIGV	15.501	2450.5		0.164	0.377	1014.234	0.232
62	IRII	3.683	8568.2	NA		NA	6026.582	NA
63	IRIIV	8.401	2853.3	NA		NA	1370.885	NA
64	IRINFCPI	4.849	0.2095	NA		NA	0.14832	NA
65	IRINFWPI	4.486	0.147	NA		NA	0.10834	NA
66	IRINPUT	3.213	17375		-0.040	0.151	13310.15	0.131
67	IRINPUTV	13.755	10506		0.173	0.355	3851.271	0.234
68	IRIP	2.728	10037		-0.001	0.292	7717.501	0.223
69	IRIPV	4.287	10253		-4.173	6.827	5880.493	4.380
70	IRIRNB	9.547	5.069		0.042	0.140	3.165	0.092
71	IRIT	1.877	2660.9		-0.112	0.387	2324.836	0.335
72	IRITV	10.044	1341.9		0.110	0.356	624.9807	0.285
73	IRIV	3.345	9124.2		-2.302	3.757	5388.517	2.436
74	IRK	2.482	74987		-0.130	0.262	54589.99	0.185
75	IRKADC	10.537	0	NA		NA	0	NA
76	IRKV	12.033	148392		-1.922	3.087	65837.22	1.993
77	IRM	4.629	13676		-0.028	0.334	9474.954	0.245
78	IRM2NFAD	7.042	12211	NA		NA	7176.907	NA
79	IRM2NFAV	7.844	20353	NA		NA	8588.477	NA
80	IRM2NGGV	6.434	32185	NA		NA	14318.99	NA
81	IRM2NGSV	11.087	2090.7	NA		NA	1026.847	NA
82	IRM2NGSVPGDPM	3.182	5655.4	NA		NA	4283.895	NA
83	IRM2NGV	6.712	33031	NA		NA	14731.8	NA
84	IRM2NPV	5.082	26675		0.386	0.528	12220.97	0.427
85	IRM2NPVPGDPM	1.812	26400		0.109	0.384	21208.58	0.328
86	IRM2NWV	14.349	16205	NA		NA	6295.559	NA
87	IRM2V	8.769	28903		0.382	0.617	11661.43	0.420
88	IRMFY	6.026	1047		-0.017	0.306	684.8122	0.214
89	IRMFYSD	6.193	357.71		0.025	0.343	247.2055	0.241
90	IRMFYV	9.917	817.98		0.736	1.203	364.5234	0.867
91	IRMG	4.867	10931		0.040	0.249	6779.403	0.154
92	IRMGD	6.113	3118.8		0.026	0.234	1729.064	0.148
93	IRMGDCIFP	4.867	27.97		0.026	0.234	17.34774	0.148
94	IRMGV	9.149	16006		1.094	1.497	7655.862	1.234
95	IRMNFS	2.618	5082.9		-0.960	2.831	4140.65	2.025
96	IRMNFS	2.856	1086.2		-2.416	6.063	814.033	3.563
97	IRMNFSDCIFP	2.474	13.712		-2.416	6.063	11.29001	3.563
98	IRMNFSV	8.587	4870.8		-3.129	7.206	2028.85	4.805
99	IRMSD	3.296	1157.9		-0.289	1.120	876.9343	0.764
100	IRMV	8.811	20733		0.819	1.247	9602.594	1.014
101	IRNFSBD	4.680	836.49	NA		NA	574.1557	NA
102	IRNFSBDC	1.757	6934.2	NA		NA	5815.246	NA
103	IRNFY	6.942	1538.4	NA		NA	1092.727	NA
104	IRNFYV	21.561	725.98	NA		NA	262.3138	NA
105	IRNIT	2.397	3566.7	NA		NA	3035.52	NA
106	IRNITV	4.919	2057.7	NA		NA	987.416	NA
107	IRNINIF	3.811	45004		-0.098	0.261	30547.56	0.203
108	IRNINIFV	11.923	32110		0.678	1.097	12095.65	0.685
109	IRNNS	5.079	43724	NA		NA	29297.63	NA

110	IRNNSV	8.321	6374.7	NA	NA	3760.04	NA	
111	IRNTRD	1.941	2542.5	NA	NA	1399.864	NA	
112	IRNTRDC	4.495	19286	NA	NA	9206.745	NA	
113	IROLV	39.071	0	NA	NA	0	NA	
114	IROLVC	18.596	0.0109	NA	NA	0.00238	NA	
115	IROUTPUT	2.214	31069		-0.004	0.095	23996.13	0.080
116	IROUTPUTV	12.013	47026		0.296	0.508	17682.87	0.322
117	IRPA	15.270	0.0623		0.564	0.909	0.02821	0.608
118	IRPBOT	38.646	13.407	NA	NA	2.41641	NA	
119	IRPC	6.284	0.058		0.522	0.940	0.03345	0.606
120	IRPCCA	5.479	0.0606		-3.551	5.886	0.04654	3.591
121	IRPDIS	27.702	3.561	NA	NA	1.08554	NA	
122	IRPG	16.696	0.1604		0.449	0.822	0.05893	0.506
123	IRPGDEM	13.179	0.0452		0.366	0.643	0.01968	0.389
124	IRPGDIM	13.200	0.0646		0.701	1.191	0.03076	0.746
125	IRPGDPF	13.179	0.0452		0.366	0.643	0.01968	0.389
126	IRPGDPM	13.179	0.0452		0.366	0.643	0.01968	0.389
127	IRPGDPNF	15.476	0.0634		0.298	0.608	0.02701	0.366
128	IRPGNIM	13.432	0.0641		0.689	1.170	0.03026	0.734
129	IRPGNPM	13.417	0.0447		0.362	0.642	0.01941	0.386
130	IRPGNS	5.861	0.1873		-4.327	29.170	0.13073	13.818
131	IRPI	9.666	0.0724		-3.037	4.977	0.04999	3.067
132	IRPIG	10.518	0.0831		0.288	0.520	0.04003	0.360
133	IRPII	18.866	0.357	NA	NA	0.14815	NA	
134	IRPINPUT	7.334	0.0288		0.258	0.491	0.01578	0.317
135	IRPIP	10.933	0.1263		-5.516	8.985	0.08472	5.578
136	IRPIT	13.181	0.0452		0.370	0.650	0.01968	0.393
137	IRPK	9.973	0.0727		-2.852	4.650	0.05049	2.878
138	IRPM	11.460	0.2376		0.982	1.465	0.10669	1.118
139	IRPMFY	7.754	0.219		1.138	2.508	0.10216	1.240
140	IRPMG	12.708	0.255		1.072	1.533	0.11174	1.210
141	IRPMNFS	6.865	0.1902		1.329	1.912	0.09811	1.456
142	IRPNFY	36.732	4.1035	NA	NA	0.90134	NA	
143	IRPNIT	13.185	0.0452		0.370	0.651	0.01968	0.393
144	IRPNNIF	13.996	0.0745		1.173	1.952	0.03886	1.215
145	IRPNNS	38.667	4.6331		4.638	48.411	0.92959	22.882
146	IRPOP	1.441	2989.8		-0.003	0.068	2645.068	0.063
147	IRPOPA	4.967	892.34		0.012	0.054	520.6202	0.037
148	IRPOPAPOP	1.972	0.0298		0.022	0.104	0.02478	0.088
149	IRPOUTPUT	16.179	0.0338		0.323	0.579	0.0152	0.352
150	IRPSP	7.390	0.2519	NA	NA	0.13363	NA	
151	IRPSUB	13.179	0.0452		0.366	0.643	0.01968	0.389
152	IRPVAOIL	9.075	0.1459		0.630	1.010	0.06976	0.735
153	IRPX	8.388	0.0911		0.042	0.198	0.03996	0.152
154	IRPXFY	7.757	0.1597		0.719	1.064	0.07279	0.842
155	IRPXNFS	6.853	0.4918		1.214	1.620	0.24368	1.389
156	IRPXNOILG	13.257	0.2006		0.411	1.235	0.08418	0.854
157	IRPXOIL	10.490	0.0295		0.000	0.043	0.01265	0.027
158	IRPYD	13.339	0.0789		0.697	1.292	0.0369	0.743
159	IRSD	3.993	862.12	NA	NA	636.9173	NA	
160	IRSDC	1.864	5882.8	NA	NA	5137.781	NA	
161	IRSDV	7.977	16970		0.371	0.609	6989.308	0.414
162	IRSDVPGDPM	3.036	10893		0.030	0.189	6731.469	0.144
163	IRSP	1.851	8665.6	NA	NA	7318.822	NA	
164	IRSPV	10.544	14228	NA	NA	5305.097	NA	

165	IRSUB	3.183	1411.3		0.068	0.477	1009.884	0.373
166	IRSUBV	4.491	827.54		0.425	0.880	404.3292	0.606
167	IRTBD	5.483	2361.4	NA		NA	1503.29	NA
168	IRTBDC	3.268	5817.3	NA		NA	4115.397	NA
169	IRTOT	4.814	43509	NA		NA	29144.53	NA
170	IRUNEMP	2.406	576.17		-0.135	0.595	465.0838	0.460
171	IRUNEMPR	2.124	3.8824		-0.168	0.580	3.34097	0.427
172	IRVAOIL	2.897	2484.9		0.017	0.065	1616.632	0.043
173	IRVAOILV	4.370	6678.2		0.650	1.012	3275.872	0.749
174	IRWIND	8.717	36.242		0.417	0.497	15.83506	0.419
175	IRWINDPGDPM	1.418	33.467		0.141	0.382	26.74086	0.325
176	IRWPI	4.839	7.8203		0.206	0.490	3.85694	0.321
177	IRWPID	10.010	5.6746		0.243	0.556	2.62815	0.327
178	IRWPIM	4.533	14.343		0.183	0.519	6.94632	0.438
179	IRWPIX	8.881	31.194		-0.575	0.703	14.10075	0.604
180	IRX	2.161	6557		0.037	0.132	5100.366	0.110
181	IRXFY	4.091	1077.1		0.450	0.914	820.9489	0.565
182	IRXFYSD	3.886	262.09		0.647	1.323	195.6822	0.780
183	IRXFYV	13.651	436.1		1.615	2.614	208.7342	1.748
184	IRXGD	2.688	1781.7		-0.013	0.137	1174.673	0.112
185	IRXGNOD	1.976	599.38		-0.007	1.073	463.1852	0.777
186	IRXGNODOP	1.933	7.6516		-0.007	1.073	6.59436	0.777
187	IRXNFS	3.463	796.31		1.043	1.886	554.5001	1.125
188	IRXNFSD	3.804	500.23		1.855	2.977	314.0997	1.947
189	IRXNFSDOP	3.463	4.9904		1.855	2.977	3.47498	1.947
190	IRXNFSV	11.530	4038.5		3.361	5.332	1463.696	3.525
191	IRXNOILG	1.933	3944.2		-0.212	1.533	3399.218	1.143
192	IRXNOILGV	6.665	5724.1		0.487	2.988	2384.679	1.693
193	IRXOIL	2.908	2996.6		0.021	0.088	1945.603	0.057
194	IRXOILB	2.908	75.961		0.024	0.090	49.31928	0.059
195	IRXOILD	3.512	1428		0.024	0.090	868.5784	0.059
196	IRXOILV	4.512	3951.1		0.023	0.123	1792.232	0.079
197	IRXSD	3.743	576.23		0.783	1.193	426.6623	0.849
198	IRXV	7.426	13361		0.088	0.281	5612.725	0.225
199	IRYD	2.503	13417		0.032	0.133	10643	0.112
200	IRYDV	14.164	31707		0.683	1.168	10244.59	0.699



No.	Actual	Corr (act, sim)	Cov (act,sim)	Theil U-Stat.	Theil U-Bias	Theil U-Var	Theil U-Cov
1	IRAD	0.925	2.7E+10	0.090	0.023	0.082	0.895
2	IRADV	0.999	8.5E+10	0.104	0.160	0.817	0.023
3	IRAS	0.925	2.7E+10	0.090	0.023	0.082	0.895
4	IRASV	0.999	8.5E+10	0.104	0.160	0.817	0.023
5	IRBOPD	0.692	5454922	0.475	0.235	0.211	0.554
6	IRBOPDC	0.629	3.6E+07	0.568	0.286	0.470	0.244
7	IRBOPEOD	0.933	1841286	0.180	0.006	0.002	0.991
8	IRBOPEODC	0.966	1.8E+07	0.117	0.295	0.253	0.452
9	IRBOT	0.935	7.2E+08	0.182	0.003	0.041	0.956
10	IRBOTV	0.467	2E+07	0.594	0.206	0.129	0.665
11	IRC	0.985	2.2E+09	0.052	0.072	0.338	0.591
12	IRCAD	0.849	2.2E+07	0.297	0.208	0.057	0.735
13	IRCADC	0.894	3.4E+08	0.220	0.341	0.226	0.433
14	IRCCA	0.993	2.9E+08	0.043	0.016	0.443	0.540
15	IRCCAV	0.997	6.8E+08	0.086	0.082	0.777	0.142
16	IRCPI	0.996	2304.65	0.052	0.029	0.463	0.508
17	IRCUV	0.997	7.4E+07	0.159	0.152	0.799	0.049
18	IRCUVPGDPM	0.981	1.2E+08	0.056	0.086	0.023	0.891
19	IRCV	0.993	7.1E+09	0.098	0.055	0.659	0.286
20	IRDDV	0.998	8.5E+08	0.135	0.135	0.813	0.052
21	IRDDVPGDPM	0.976	3.2E+08	0.074	0.143	0.227	0.630
22	IRDIS	0.645	9.6E+07	0.261	0.000	0.043	0.957
23	IRDISV	0.922	2.3E+08	0.375	0.303	0.498	0.199
24	IREENOIL	0.996	3275820	0.158	0.245	0.696	0.059
25	IREM	0.993	8138374	0.173	0.112	0.796	0.092
26	IREMP	0.994	1E+07	0.022	0.227	0.252	0.520
27	IRFYSBD	0.839	379337	0.223	0.035	0.001	0.964
28	IRFYSBDC	0.994	5.3E+07	0.081	0.649	0.171	0.180
29	IRG	0.981	2.9E+08	0.063	0.214	0.267	0.519
30	IRGBDV	0.185	2489448	0.722	0.231	0.137	0.632
31	IRGBDVC	-0.786	-2E+08	0.942	0.197	0.045	0.758
32	IRGDEM	0.991	7.1E+09	0.044	0.136	0.481	0.384
33	IRGDEM V	0.999	3E+10	0.098	0.142	0.823	0.035
34	IRGDIM	0.910	9.2E+09	0.106	0.049	0.107	0.844
35	IRGDIM V	0.999	3E+10	0.098	0.142	0.823	0.035
36	IRGDPF	0.992	7.1E+09	0.041	0.198	0.428	0.374
37	IRGDPF V	0.999	3E+10	0.095	0.138	0.816	0.046
38	IRGDPM	0.991	7.1E+09	0.044	0.136	0.481	0.384
39	IRGDPM V	0.999	3E+10	0.098	0.142	0.823	0.035
40	IRGDPNF	0.994	6.5E+09	0.045	0.194	0.449	0.356
41	IRGDPNF V	0.996	2.2E+10	0.110	0.097	0.784	0.119
42	IRGEFIDC	1.000	1.3E+07	0.000	0.402	0.255	0.343
43	IRGESV	0.988	3.1E+07	0.203	0.224	0.656	0.120
44	IRGEV	1.000	1.4E+09	0.030	0.224	0.713	0.063
45	IRGNIM	0.908	9.2E+09	0.106	0.045	0.097	0.858
46	IRGNIM V	0.999	3E+10	0.097	0.143	0.823	0.035
47	IRGNPM	0.990	7E+09	0.044	0.149	0.431	0.420
48	IRGNPM V	0.999	3E+10	0.097	0.143	0.823	0.035
49	IRGNS	0.594	1.3E+09	0.274	0.107	0.014	0.879
50	IRGNSV	0.993	3.3E+09	0.058	0.052	0.091	0.857
51	IRGRMV	0.967	2.8E+07	0.206	0.249	0.448	0.302
52	IRGROILV	0.999	9.6E+07	0.045	0.174	0.669	0.157
53	IRGRSV	0.988	3.1E+07	0.203	0.224	0.656	0.120
54	IRGRTDV	0.996	3.4E+07	0.059	0.103	0.456	0.440

55	IRGRTIV	0.987	1.7E+07	0.210	0.211	0.677	0.112
56	IRGRTV	0.997	1E+08	0.116	0.199	0.706	0.095
57	IRGRV	0.999	1.5E+09	0.097	0.235	0.714	0.051
58	IRGV	0.997	6.5E+08	0.156	0.152	0.799	0.049
59	IRI	0.944	9.8E+08	0.082	0.013	0.101	0.886
60	IRIG	0.991	1.7E+08	0.042	0.001	0.331	0.668
61	IRIGV	0.990	1.9E+08	0.078	0.003	0.360	0.637
62	IRII	0.754	9.5E+07	0.272	0.003	0.150	0.847
63	IRIIV	0.954	8E+07	0.143	0.014	0.041	0.945
64	IRINFCPI	0.385	0.00927	0.462	0.006	0.318	0.676
65	IRINFWPI	0.519	0.01087	0.350	0.003	0.063	0.934
66	IRINPUT	0.933	1.9E+09	0.079	0.008	0.097	0.895
67	IRINPUTV	0.999	6.8E+09	0.057	0.110	0.744	0.146
68	IRIP	0.893	4E+08	0.110	0.016	0.043	0.941
69	IRIPV	0.994	1.1E+09	0.140	0.073	0.801	0.126
70	IRIRNB	0.918	128.914	0.072	0.060	0.045	0.895
71	IRIT	0.587	4248587	0.178	0.128	0.026	0.846
72	IRITV	0.987	1.8E+07	0.140	0.127	0.614	0.259
73	IRIV	0.996	2.2E+09	0.088	0.083	0.693	0.223
74	IRK	0.996	2.3E+11	0.045	0.023	0.642	0.336
75	IRKADC	1.000	1E+08	0.000	0.000	1.000	0.000
76	IRKV	0.995	4.8E+11	0.096	0.071	0.718	0.210
77	IRM	0.908	9.1E+08	0.112	0.009	0.004	0.987
78	IRM2NFAD	0.231	1E+07	0.564	0.281	0.252	0.467
79	IRM2NFAV	0.661	5E+07	0.750	0.176	0.701	0.124
80	IRM2NGGV	0.981	1.3E+09	0.353	0.197	0.755	0.049
81	IRM2NGSV	0.997	7.2E+08	0.034	0.005	0.137	0.858
82	IRM2NGSVPGDPM	0.983	5.4E+08	0.060	0.034	0.393	0.573
83	IRM2NGV	-0.355	-6E+07	0.883	0.191	0.394	0.415
84	IRM2NPV	0.993	3.8E+09	0.191	0.209	0.721	0.071
85	IRM2NPVPGDPM	0.895	1.2E+09	0.171	0.210	0.376	0.414
86	IRM2NWW	-0.593	-4E+07	0.879	0.095	0.007	0.898
87	IRM2V	0.999	7.1E+09	0.151	0.152	0.826	0.022
88	IRMFY	0.978	2.4E+07	0.080	0.017	0.016	0.967
89	IRMFYSD	0.950	1151167	0.098	0.011	0.048	0.941
90	IRMFYV	0.945	2324522	0.221	0.162	0.437	0.401
91	IRMG	0.926	7.3E+08	0.099	0.025	0.000	0.975
92	IRMGD	0.931	5.5E+07	0.116	0.051	0.115	0.834
93	IRMGDCIFP	0.922	4467.98	0.098	0.025	0.011	0.964
94	IRMGV	0.989	8.9E+08	0.233	0.213	0.709	0.078
95	IRMNFS	0.622	1.7E+07	0.358	0.007	0.189	0.804
96	IRMNFS	0.774	1345446	0.292	0.071	0.261	0.668
97	IRMNFSDCIFP	0.657	128.831	0.362	0.004	0.279	0.717
98	IRMNFSV	0.993	2.4E+07	0.407	0.160	0.826	0.014
99	IRMSD	0.864	3832269	0.168	0.048	0.049	0.904
100	IRMV	0.990	1.2E+09	0.257	0.203	0.743	0.055
101	IRNFSBD	0.773	994795	0.289	0.001	0.165	0.834
102	IRNFSBDC	0.984	2.3E+08	0.170	0.159	0.692	0.149
103	IRNFY	0.751	3371890	0.362	0.049	0.009	0.943
104	IRNFYV	0.394	153540	0.536	0.080	0.024	0.897
105	IRNIT	0.159	1079235	0.368	0.039	0.066	0.896
106	IRNITV	0.737	2798340	0.459	0.165	0.363	0.472
107	IRNNIF	0.878	6.6E+09	0.122	0.046	0.046	0.908
108	IRNNIFV	0.998	2.1E+10	0.098	0.140	0.788	0.072
109	IRNNS	0.423	6.2E+08	0.401	0.117	0.000	0.883

110	IRNNSV	0.987	1E+09	0.091	0.239	0.113	0.649
111	IRNTRD	0.775	1425947	0.645	0.303	0.569	0.128
112	IRNTRDC	0.972	1.1E+08	0.610	0.228	0.755	0.017
113	IROLV	1.000	2.8E+07	0.000	0.000	0.000	0.000
114	IROLVC	1.000	1E+09	0.000	0.048	0.368	0.584
115	IROUTPUT	0.981	1.6E+10	0.049	0.038	0.318	0.644
116	IROUTPUTV	0.999	6.5E+10	0.082	0.133	0.808	0.059
117	IRPA	0.999	0.2711	0.053	0.181	0.674	0.145
118	IRPBOT	0.317	4.56962	0.901	0.019	0.872	0.109
119	IRPC	0.993	0.23978	0.052	0.000	0.024	0.976
120	IRPCCA	0.996	0.23374	0.056	0.060	0.400	0.540
121	IRPDIS	0.140	0.49495	0.771	0.000	0.518	0.481
122	IRPG	0.993	0.36714	0.117	0.089	0.721	0.190
123	IRPGDEM	0.999	0.26367	0.039	0.143	0.678	0.179
124	IRPGDIM	0.999	0.26977	0.055	0.201	0.657	0.142
125	IRPGDPF	0.999	0.26367	0.039	0.143	0.678	0.179
126	IRPGDPM	0.999	0.26367	0.039	0.143	0.678	0.179
127	IRPGDPNF	0.997	0.25423	0.055	0.059	0.547	0.394
128	IRPGNIM	0.999	0.27018	0.054	0.197	0.660	0.143
129	IRPGNPM	0.999	0.26401	0.038	0.139	0.677	0.184
130	IRPGNS	0.948	0.24311	0.168	0.053	0.185	0.762
131	IRPI	0.995	0.22277	0.068	0.043	0.495	0.462
132	IRPIG	0.992	0.16973	0.086	0.014	0.613	0.374
133	IRPII	0.948	0.4563	0.239	0.049	0.560	0.391
134	IRPINPUT	0.998	0.23126	0.026	0.027	0.004	0.970
135	IRPIP	0.990	0.24833	0.113	0.012	0.687	0.301
136	IRPIT	0.999	0.26367	0.039	0.143	0.678	0.179
137	IRPK	0.994	0.24947	0.065	0.065	0.410	0.525
138	IRPM	0.995	0.42242	0.162	0.187	0.741	0.072
139	IRPMFY	0.982	0.21602	0.199	0.205	0.626	0.169
140	IRPMG	0.994	0.43823	0.171	0.178	0.744	0.077
141	IRPMNFS	0.997	0.35005	0.142	0.247	0.693	0.060
142	IRPNFY	0.037	0.10549	0.854	0.039	0.638	0.322
143	IRPNIT	0.999	0.26367	0.039	0.143	0.678	0.179
144	IRPNNIF	0.998	0.27839	0.062	0.242	0.580	0.178
145	IRPNNS	0.142	0.30656	0.895	0.022	0.805	0.173
146	IRPOP	0.991	1.6E+08	0.034	0.091	0.590	0.319
147	IRPOPA	0.991	1.6E+07	0.036	0.094	0.558	0.349
148	IRPOPAPOP	0.075	0.00003	0.052	0.032	0.130	0.838
149	IRPOUTPUT	0.999	0.25256	0.029	0.084	0.513	0.403
150	IRPSP	0.969	0.33487	0.187	0.121	0.536	0.343
151	IRPSUB	0.999	0.26367	0.039	0.143	0.678	0.179
152	IRPVAOIL	0.971	0.32951	0.111	0.016	0.055	0.929
153	IRPX	1.000	0.37641	0.066	0.163	0.794	0.043
154	IRPXFY	0.993	0.26524	0.135	0.168	0.679	0.153
155	IRPXNFS	0.998	0.43407	0.309	0.230	0.762	0.008
156	IRPXNOILG	0.994	0.46687	0.129	0.145	0.721	0.134
157	IRPXOIL	0.999	0.33223	0.023	0.021	0.034	0.945
158	IRPYD	0.994	0.25982	0.067	0.065	0.422	0.513
159	IRSD	0.819	1630292	0.215	0.004	0.026	0.970
160	IRSBDC	0.989	4.9E+08	0.092	0.042	0.638	0.320
161	IRSDV	0.999	2.1E+09	0.162	0.159	0.821	0.020
162	IRSDVPGDPM	0.954	8E+08	0.095	0.113	0.243	0.645
163	IRSP	0.903	2.8E+08	0.140	0.176	0.009	0.815
164	IRSPV	0.988	1E+09	0.199	0.131	0.748	0.121

165	IRSUB	0.777	2921020	0.201	0.032	0.128	0.840
166	IRSUBV	0.981	5742576	0.151	0.186	0.493	0.321
167	IRTBD	0.880	2E+07	0.222	0.000	0.016	0.984
168	IRTBDC	0.981	8.6E+08	0.060	0.000	0.005	0.995
169	IRTOT	0.479	6.2E+08	0.576	0.157	0.135	0.709
170	IRUNEMP	0.903	724711	0.189	0.004	0.528	0.467
171	IRUNEMPR	0.767	14.6666	0.193	0.045	0.363	0.592
172	IRVAOIL	0.992	3.5E+08	0.027	0.132	0.020	0.849
173	IRVAOILV	0.971	6.2E+08	0.117	0.115	0.059	0.826
174	IRWIND	0.993	3089.47	0.273	0.191	0.778	0.031
175	IRWINDPGDPM	0.904	1672.99	0.163	0.313	0.371	0.316
176	IRWPI	0.991	2005.77	0.076	0.136	0.267	0.597
177	IRWPID	0.993	2234.05	0.053	0.019	0.001	0.980
178	IRWPIM	0.976	1441.19	0.163	0.182	0.472	0.347
179	IRWPIX	0.984	2030.62	0.293	0.203	0.728	0.069
180	IRX	0.959	4.6E+08	0.063	0.078	0.019	0.903
181	IRXFY	0.982	2.6E+07	0.080	0.036	0.117	0.847
182	IRXFYSD	0.958	685070	0.106	0.018	0.097	0.884
183	IRXFYV	0.944	1438557	0.153	0.081	0.021	0.899
184	IRXGD	0.989	8.4E+07	0.055	0.168	0.262	0.571
185	IRXGNOD	0.968	2504414	0.139	0.182	0.359	0.459
186	IRXGNODOP	0.913	192.991	0.177	0.007	0.366	0.627
187	IRXNFS	0.944	2358991	0.198	0.270	0.286	0.444
188	IRXNFSD	0.866	237587	0.368	0.291	0.416	0.293
189	IRXNFSDOP	0.770	24.6714	0.324	0.270	0.138	0.591
190	IRXNFSV	0.991	1.4E+07	0.452	0.131	0.853	0.016
191	IRXNOILG	0.902	4.4E+07	0.204	0.007	0.382	0.611
192	IRXNOILGV	0.994	1.3E+08	0.220	0.170	0.783	0.046
193	IRXOIL	0.989	3.5E+08	0.034	0.129	0.020	0.851
194	IRXOILB	0.988	208352	0.036	0.129	0.018	0.853
195	IRXOILD	0.988	6.8E+07	0.049	0.110	0.104	0.785
196	IRXOILV	0.999	5.5E+08	0.075	0.193	0.724	0.083
197	IRXSD	0.907	1162225	0.167	0.281	0.000	0.719
198	IRXV	0.999	1.5E+09	0.154	0.173	0.813	0.014
199	IRYD	0.989	3.7E+09	0.051	0.235	0.316	0.449
200	IRYDV	0.994	1.3E+10	0.122	0.090	0.742	0.168