

**irf describe** — Describe an IRF file

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## Description

`irf describe` describes the specification of the estimation command and the specification of the IRF used to create the IRF results that are saved in an IRF file.

## Quick start

Short summary of all IRF results in the active IRF file

```
irf describe
```

Summary of model and IRF specification for `irf1` in the active IRF file

```
irf describe irf1
```

Same as above, but for `irf1` in IRF file `myirf.irf`

```
irf describe irf1, using(myirf)
```

Same as above, and also set `myirf.irf` as the active IRF file

```
irf describe irf1, set(myirf)
```

Note: `irf` commands can be used after `var`, `svar`, `ivsvar`, `vec`, `arma`, `arfima`, `lpirf`, `dsge`, or `dsgenl`; see [\[TS\] var](#), [\[TS\] var svar](#), [\[TS\] var ivsvar](#), [\[TS\] vec](#), [\[TS\] arma](#), [\[TS\] arfima](#), [\[TS\] lpirf](#), [\[DSGE\] dsge](#), or [\[DSGE\] dsgenl](#).

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## Syntax

```
irf describe [irf_resultslist] [, options]
```

<i>options</i>	Description
<code>set(<i>filename</i>)</code>	make <i>filename</i> active
<code>using(<i>irf_filename</i>)</code>	describe <i>irf_filename</i> without making active
<code>detail</code>	show additional details of IRF results
<code>variables</code>	show underlying structure of the IRF dataset

`collect` is allowed; see [U] 11.1.10 Prefix commands.

## Options

`set(filename)` specifies the IRF file to be described and set; see [TS] `irf set`. If *filename* is specified without an extension, `.irf` is assumed.

`using(irf_filename)` specifies the IRF file to be described. The active IRF file, if any, remains unchanged. If *irf\_filename* is specified without an extension, `.irf` is assumed.

`detail` specifies that `irf describe` display detailed information about each set of IRF results. `detail` is implied when *irf\_resultslist* is specified.

`variables` is a programmer's option; additionally displays the output produced by the `describe` command.

## Remarks and examples

[stata.com](https://www.stata.com)

If you have not read [TS] `irf`, please do so.

`irf describe` specified without *irf\_resultslist* provides a short summary of the model used to create each set of results in an IRF file. If *irf\_resultslist* is specified, then `irf describe` provides details of the model specification and the IRF specification used to create each set of IRF results. If `set()` or `using()` is not specified, the IRF results of the active IRF file are described.

### ► Example 1

```
. use https://www.stata-press.com/data/r18/lutkepohl2
(Quarterly SA West German macro data, Bil DM, from Lutkepohl 1993 Table E.1)
. var dln_inv dln_inc dln_consump if qtr<=tq(1978q4), lags(1/2) dfk
(output omitted)
```

We create three sets of IRF results:

```
. irf create order1, set(myirfs, replace)
(file myirfs.irf created)
(file myirfs.irf now active)
(file myirfs.irf updated)
. irf create order2, order(dln_inc dln_inv dln_consump)
(file myirfs.irf updated)
. irf create order3, order(dln_inc dln_consump dln_inv)
(file myirfs.irf updated)
. irf describe
Contains irf results from myirfs.irf (dated 24 Mar 2023 22:38)
```

irfname	model	endogenous variables and order (*)
order1	var	dln_inv dln_inc dln_consump
order2	var	dln_inc dln_inv dln_consump
order3	var	dln_inc dln_consump dln_inv

(\*) order is relevant only when model is var

The output reveals the order in which we specified the variables.

```
. irf describe order1
irf results for order1
Estimation specification
  model: var
  endog: dln_inv dln_inc dln_consump
  sample: quarterly data from 1960q4 to 1978q4
  lags: 1 2
  constant: constant
  exog: none
  exogvars: none
  exlags: none
  varcns: unconstrained

IRF specification
  step: 8
  order: dln_inv dln_inc dln_consump
  std error: asymptotic
  reps: none
```

Here we see a summary of the model we fit as well as the specification of the IRFs.

## Stored results

`irf describe` stores the following in `r()`:

### Scalars

<code>r(N)</code>	number of observations in the IRF file
<code>r(k)</code>	number of variables in the IRF file
<code>r(width)</code>	width of dataset in the IRF file
<code>r(changed)</code>	flag indicating that data have changed since last saved

### Macros

<code>r(_version)</code>	version of IRF results file
<code>r(irfnames)</code>	names of IRF results in the IRF file
<code>r(irfname_model)</code>	<code>var</code> , <code>sr var</code> , <code>lr var</code> , <code>ivsvar</code> , <code>vec</code> , <code>arima</code> , <code>arfima</code> , <code>lpirf</code> , <code>dsge</code> , or <code>dsgenl</code>
<code>r(irfname_order)</code>	Cholesky order assumed in IRF estimates
<code>r(irfname_exog)</code>	exogenous variables, and their lags, in vector autoregressive (VAR) or underlying VAR models
<code>r(irfname_exogvars)</code>	exogenous variables in VAR or underlying VAR models
<code>r(irfname_constant)</code>	<code>constant</code> or <code>noconstant</code>
<code>r(irfname_lags)</code>	lags in model
<code>r(irfname_exlags)</code>	lags of exogenous variables in model
<code>r(irfname_tmin)</code>	minimum value of <code>timevar</code> in the estimation sample
<code>r(irfname_tmax)</code>	maximum value of <code>timevar</code> in the estimation sample
<code>r(irfname_timevar)</code>	name of <code>tset</code> <code>timevar</code>
<code>r(irfname_tsfmt)</code>	format of <code>timevar</code> in the estimation sample
<code>r(irfname_varcns)</code>	<code>unconstrained</code> or colon-separated list of constraints placed on VAR model coefficients
<code>r(irfname_svarcns)</code>	"." or colon-separated list of constraints placed on SVAR model coefficients
<code>r(irfname_step)</code>	maximum step in IRF estimates
<code>r(irfname_stderror)</code>	<code>asymptotic</code> , <code>bs</code> , <code>bsp</code> , or <code>none</code> , depending on type of standard errors specified to <code>irf create</code>
<code>r(irfname_reps)</code>	"." or number of bootstrap replications performed
<code>r(irfname_version)</code>	version of IRF file that originally held <code>irfname</code> IRF results
<code>r(irfname_rank)</code>	"." or number of cointegrating equations
<code>r(irfname_trend)</code>	"." or <code>trend()</code> specified in <code>vec</code>
<code>r(irfname_veccns)</code>	"." or constraints placed on vector error-correction model parameters
<code>r(irfname_sind)</code>	"." or normalized seasonal indicators included in <code>vec</code>

## Also see

[TS] **irf** — Create and analyze IRFs, dynamic-multiplier functions, and FEVDs

[TS] **var intro** — Introduction to vector autoregressive models

[TS] **vec intro** — Introduction to vector error-correction models

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