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USE OF INTERNATIONAL FUTURES (IFs) ON AN  
APPLE MACINTOSH

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# Use of International Futures (IFs) on an Apple Macintosh

## Installation

IFs is a Windows based program. Therefore, in order to install and run it on a Mac, it is necessary to be able to configure your machine to do so. The most practical way to do this, and the one with which we have some experience, is to install a virtual machine running Windows on your Mac. Your Mac OS will act as the "host". All new Macs using an Intel chip currently come with a program called Boot Camp, which allows you to do so. There are several other alternatives, however. These include:

- Parallels (<http://www.parallels.com/>)
- VMWare Fusion (<http://www.vmware.com/products/fusion/>)
- Virtual Box (<http://www.virtualbox.org/>)

Parallels and VMWare Fusion are commercial products and can be purchased online or at the DU bookstore. VirtualBox is open source and, therefore, free. All three of these are equally easy to use (although one user has reported difficulty with VMWare); they do differ in some features, but none of these differences seem to affect the use of IFs. They have a major advantage over Boot Camp in that you can open the virtual machine without shutting down the Mac OS; with Boot Camp you are required to choose between Mac and Windows when you start the machine.

Irrespective of which software you choose for setting up a Windows virtual machine, you will also need the software to install the Windows operating system (Windows 7 is recommended, but IFs will also work with XP or Vista). When installing the virtual machine, the software will ask you to set aside a certain amount of space on your machine's hard drive, which will act as the hard drive for your virtual machine. The amount allocated will determine how many IFs runs you will be able to store. We recommend that you allocate at least 20Gb to this virtual disk.

Once you have set up your virtual machine and are running Windows, the installation of IFs works pretty much the same as it does on a native Windows machine. If you want to install directly from the CD/DVD, make sure it is being read by the virtual machine and not the main machine (i.e. the Mac). If so, it should start the installation software automatically when it reads the CD/DVD and you can simply follow the directions. [Some users find it best to copy the files from the CD/DVD to a folder on the desktop on their virtual machine and then run the installation by running the IFsSetup.exe file in this folder; one user has said that running the IFsSetup.exe file as an administrator, and/or logging onto windows as an administrator are important, but others have not found that to be an issue.]

## Use

Since IFs is installed on the virtual machine, you need to be in the virtual machine in order to run IFs. As on a native Windows machine, you can open it with Start-Programs or you can create an icon for the desktop or in the Quick Launch bar.

Certain features of IFs make use of keyboard/mouse combinations that work differently on a Mac than on a native Windows machine. These include Right-Click and CTRL+Left Click. There are generally equivalent ways to do these on a Mac (e.g., Control+Click on a single button mouse on a Mac is the same as a Right-click on a native Windows machine). If you have a two-button mouse for your Mac, it will work seamlessly as a window's mouse. The virtual machines themselves may include instructions on how to do this.

## Other Notes

Sometimes you will want to export or save data from IFs. IFs often uses Excel for this purpose. Therefore, it would be good to install a copy of Excel on your virtual machine. If you think you will eventually want to look at some of the database files underlying IFs, you will also need to install a copy of Access.

Most virtual machine software lets you "share" folders, allowing you to transfer files between your virtual machine and the host Mac OS, this will be essential if you do not want to install MS Office on your virtual machine. You will need to look at the technical documentation for whatever software you choose to set up your virtual machine in order to determine how to set this up.

Printing from a virtual machine can be tricky. You will need to look at the technical documentation for whatever software you choose to set up your virtual machine in order to determine how to allow for printing from the virtual machine.

*We hope this helps you in setting up and using IFs on your Mac. If you have serious difficulties, several of the RAs in the Pardee Center are running IFs on their own Macs and should be able to assist you with most problems.*