

1. Push R0 onto stack (R0 is caller-saved; that's why the compiler needs to save it)
2. Push parameters onto stack
3. Call subroutine foo
4. Read return value
5. Pop parameters and return value (destroy the params)
6. Pop R0 off of stack
7. PRETEND THAT R3 is CALLEE SAVED, BUT foo needs to use it
8. At start of foo (between setting up stack frame and executing code), push R3
9. Just before tearing down stack frame (after executing code), pop R3

