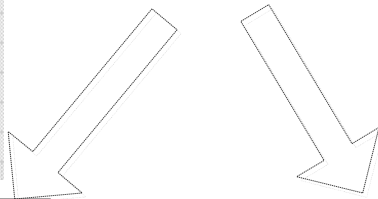


```
void foo(int* mem, ...) {
  bb48:
  ...
  bb70:
    ebp = *(mem+(ecx+eax*4)/sizeof(int));
    *(mem+(edi+eax*4)/sizeof(int)) = ebp;
    ebp = *(mem+(esi+eax*4-4)/sizeof(int));
    *(mem+(ebx+eax*4)/sizeof(int)) = ebp;
    eax = eax+1;
    if(eax != edx)
      goto bb70;
  ...
  stk_esp += 1;
  if(stk_esp != edx)
    goto bb48;
  ...
}
```

Banerjee's test using values from past profile

	Ld1	Ld2	St1	St2
St1	<del>(*,*)</del>	<del>(*,*)</del>	(=,=)	<del>(*,*)</del>
St2	(*,*) ↓ <del>(*,*)</del>	<del>(*,*)</del>	<del>(*,*)</del>	(=,=)



Without Memory Barrier

```
void foo(int* restrict mem0, int* restrict mem1,
        int* restrict mem2...) {
  bb48:
  ...
  bb70:
    ebp = *(mem0+(ecx+eax*4)/sizeof(int));
    *(mem1+(edi+eax*4)/sizeof(int)) = ebp;
    ebp = *(mem2+(esi+eax*4-4)/sizeof(int));
    *(mem0+(ebx+eax*4)/sizeof(int)) = ebp;
    eax = eax+1;
    if(eax != edx)
      goto bb70;
  ...
  stk_esp += 1;
  if(stk_esp != edx)
    goto bb48;
  ...
}
```

With Memory Barrier

```
void foo(int* restrict mem0, int* restrict mem1,
        int* restrict mem2, int* restrict mem3...)
{
  bb48:
  ...
  bb70:
    ebp = *(mem0+(ecx+eax*4)/sizeof(int));
    *(mem1+(edi+eax*4)/sizeof(int)) = ebp;
    ebp = *(mem2+(esi+eax*4-4)/sizeof(int));
    *(mem3+(ebx+eax*4)/sizeof(int)) = ebp;
    eax = eax+1;
    if(eax != edx)
      goto bb70;
  barrier;
  ...
  stk_esp += 1;
  if(stk_esp != edx)
    goto bb48;
  ...
}
```