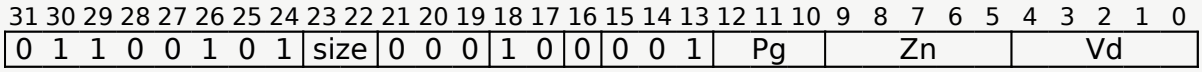
FMAXNMV

Floating-point maximum number recursive reduction to scalar

Floating-point maximum number horizontally over all lanes of a vector using a recursive pairwise reduction, and place the result in the SIMD&FP scalar destination register. Inactive elements in the source vector are treated as the default NaN.
Regardless of the value of FPCR.AH, the behavior is as follows:

- Negative zero compares less than positive zero.
- If one value is numeric and the other is a quiet NaN, the result is the numeric value.
- When FPCR.DN is 0, if either value is a signaling NaN or if both values are NaNs, the result is a quiet NaN.
- When FPCR.DN is 1, if either value is a signaling NaN or if both values are NaNs, the result is Default NaN.




```
FMAXNMV <V><d>, <Pg>, <Zn>.<T>
```

```
if !HaveSVE() && !HaveSME() then UNDEFINED;
if size == '00' then UNDEFINED;
constant integer esize = 8 << UInt(size);
integer g = UInt(Pg);
integer n = UInt(Zn);
integer d = UInt(Vd);
```

Assembler Symbols

<V>
Is a width specifier, encoded in “size”:

size	<V>
00	RESERVED
01	H
10	S
11	D

<d>
Is the number [0-31] of the destination SIMD&FP register, encoded in the "Vd" field.

<Pg>
Is the name of the governing scalable predicate register P0-P7, encoded in the "Pg" field.

<Zn>
Is the name of the source scalable vector register, encoded in the "Zn" field.

<T>

Is the size specifier, encoded in “size”:

size	<T>
00	RESERVED
01	H
10	S
11	D

Operation

```
CheckSVEEnabled();
constant integer VL = CurrentVL;
constant integer PL = VL DIV 8;
bits(PL) mask = P[g, PL];
bits(VL) operand = if AnyActiveElement(mask, esize) then Z[n, VL] else
bits(esize) identity = FPDefaultNaN(esize);

V[d, esize] = ReducePredicated(ReduceOp_FMAXNUM, operand, mask, identit
```


Internal version only: isa v33.64, AdvSIMD v29.12, pseudocode no_diffs_2023_09_RC2, sve v2023-06_rel ; Build timestamp: 2023-09-18T17:56