5.

In what year was the peak in terms of number of firms listed in the US stock exchange? What period of history were those years? Is the number of listings today lower than this period? What about the historical average?

a. Note: a "stock" has a SHRCD (10,11) in crsp.dsenames

input: msf; dsenames

code:

```sql
CREATE TABLE temp_u3554218.msf_shrcd AS SELECT
a.permno,
a.altprcdt,
a.prc,
a.shrout,
a.ret,
a.retx,
b.shrcd,
b.namedt,
b.nameendt
FROM
    crsp.msf a
    INNER JOIN crsp.dsenames b ON a.permno = b.permno;
ALTER TABLE temp_u3554218.msf_shrcd ADD COLUMN YEAR SMALLINT;
UPDATE temp_u3554218.msf_shrcd
SET YEAR = YEAR ( altprcdt );
CREATE TABLE temp_u3554218.Y_stock_listed AS SELECT YEAR
,
permno,
COUNT( * ) AS count_YS
FROM
    temp_u3554218.msf_shrcd
WHERE
    ret IS NOT NULL
    AND shrcd IS NOT NULL
    AND shrcd IN ( 10, 11 )
GROUP BY
    YEAR,
    permno;
SELECT
    *
FROM
    temp_u3554218.Y_stock_listed
    LIMIT 10;
SELECT YEAR
    ,
    COUNT( * ) AS count_stockPerYear
```

```
FROM
    temp_u3554218.Y_stock_listed
GROUP BY
YEAR
ORDER BY
    count_stockPerYear DESC limit 5;
```

output:

year	count_stockPerYear
1997	8089
1996	7915
1998	7893
1999	7547
1995	7428

as the result shows, 1997 is the peak in term of number of firms listed in the US stock exchange.

Our result is not consistent with what Doidge Karolyi Stulz found, but is in line with what world bank has found.

b. Bonus: did this trend occur elsewhere in the developed world? For the high-level answer, you may consult the paper Doidge Karolyi Stulz (2017). For showing the answer, you may want to compare the number of listed firms in comp.g_funda to those in comp.funda. Keep in mind the consolidation code (sometimes the subsidiaries report financials, which Compustat keeps track of).

I don't think this trend occurred every where in the developed world. As the world bank disclosed, Japan, Australia, Canada and France the saw the increase of listed firms. In this way, this could not have been the common case in the developed markets. Also, as the paper *THE U.S. LISTING GAP* pointed out, there are not particular reason for the decrease of listed firms in the U.S markets.

Linking data

1. Often times, databases use different conventions to track companies. CRSP uses Permno, Thomson Reuters Worldscope has its own ID, Compsutat has gvkey, Capital IQ has CompanyID. date,ret,permno
2. Table 1: crsp.msf as **A**
3. Table 2: link.ccm_linktable as **B** provides dates in which a permno, gvkey link is valid
4. Join on the permno column
5. WHERE conditions

   a. make sure the date of table **A** is a valid link between the link start date and link end date in the link.ccmxpf_linktable

   b. the linkable USEDFLAG is not -1

input : msf

code:

```sql
SELECT
    A.permno A_permno,
    B.*
FROM
    crsp.msf A
    JOIN link.ccmxpf_linktable B ON A.permno = B.lpermno
WHERE
    A.permno IS NOT NULL
    AND B.gvkey IS NOT NULL
    AND A.date BETWEEN B.linkdt
    AND B.linkenddt
    AND B.USEDFLAG != - 1 limit 10;
```

output: (extract the first 10 rows)

A_permno	gvkey	linkprim	liid	linktype	lpermno	lpermco	USEDFLAG	linkdt	linkenddt
25881	1000	P	1	LU	25881	23369	1	13/11/1970	30/6/1978
25881	1000	P	1	LU	25881	23369	1	13/11/1970	30/6/1978
25881	1000	P	1	LU	25881	23369	1	13/11/1970	30/6/1978
25881	1000	P	1	LU	25881	23369	1	13/11/1970	30/6/1978
25881	1000	P	1	LU	25881	23369	1	13/11/1970	30/6/1978
25881	1000	P	1	LU	25881	23369	1	13/11/1970	30/6/1978
25881	1000	P	1	LU	25881	23369	1	13/11/1970	30/6/1978
25881	1000	P	1	LU	25881	23369	1	13/11/1970	30/6/1978
25881	1000	P	1	LU	25881	23369	1	13/11/1970	30/6/1978
25881	1000	P	1	LU	25881	23369	1	13/11/1970	30/6/1978