EXECUTIVE SUMMARY

U.S. TRADE WITH THE WORLD

AN ESTIMATE OF 2001 LOST U.S. FEDERAL INCOME TAX REVENUES

DUE TO

OVER-INVOICED IMPORTS AND UNDER-INVOICED EXPORTS

BY

SIMON J. PAK, PH.D.

Associate Professor of Finance
Penn State University – Great Valley, Malvern, PA 19355
Trade Research Institute, Inc.

Tel: (610)725-5343 Email: <u>sjp14@psu.edu</u>

AND

JOHN S. ZDANOWICZ, PH.D.

Professor of Finance, Chapman Graduate School of Business Director, Jerome Bain Real Estate Institute Florida International University, Miami, Florida 33199 Trade Research Institute, Inc.

Tel: (305)348-2771 Email: zdanowic@fiu.edu

October 31, 2002

Objective

The objective of this research is to estimate the impact of over-invoiced imports and under-invoiced exports on U.S. federal income tax revenues during 2001. The inclusion of over-invoiced imports and under-invoiced exports in business tax returns artificially lowers taxable income and federal income tax liability. This research determines the estimate of lost tax revenue due to abnormal international trade pricing and is based on pricing norms, (interquartile range), as specified in the section 482 regulations of the Internal Revenue Service tax code.

<u>Data</u>

This research is based on the U.S. import and export data produced by the U.S. Department of Commerce, Bureau of Census, and contained in the U.S. Merchandise trade database. This is the same database used to determine the U.S. balance of trade. We assume that the U.S. Treasury, U.S. Customs Bureau, and the U.S. Department of Commerce maintain a quality control system to minimize errors and produce and sell accurate data.

Methodology - Summary

- 1. We determined the median price, lower quartile export price and the upper quartile import price for every commodity exported and imported to and from every country. (There are 16,390 import commodity codes and 8,568 export commodity codes in 2001. There are 230 countries that trade with the United States in the same year.)
- 2. We evaluated every import record and compared it to the country specific import upper quartile price to determine if it was over-valued.. We determined the dollar value of over- valuation for every import transaction.
- 3. We evaluated every export record and compared it to the country specific export lower quartile price to determine if it was under-valued. We determined the dollar value of under-valuation for every export transaction.
- 4. We determined the dollar value impact on the cost of goods sold due to the over-valuation for every import transaction. We determined the dollar value impact on sales revenue due to under-valuation for every export transaction.
- 5. We determined the dollar value impact of over-stated cost of goods sold and under-stated sales revenues on taxable income.
- 6. We calculated the tax loss for every transaction assuming a 34% tax rate.
- 7. The total estimated tax loss for 2001 is \$53.1 Billion. (See Charts A, B, C)

Examples of Abnormal Transactions

In Charts D and E we give some examples of abnormally priced transactions that are contained in the U.S. Merchandise Trade Database. We have observed thousands of abnormally priced transactions in all U.S. Customs Districts and with all countries in the world.

Discussion

We believe this is a conservative estimate for the following reasons:

- 1. We only analyze quantifiable commodities that have units of measure such as kilograms, tons, units, etc. If we assume the same proportion of over and under invoicing for the commodities that do not specify quantities, our estimated tax loss would be significantly higher.
- 2. We use the interquartile range as specified by the IRS 482 regulations to determine abnormality. However, we determine the magnitude of over or under pricing by comparing the stated prices to the interquartile prices. According to IRS code, abnormal prices would be adjusted back to the median price.

CHART A: TOP 25 SOURCES OF LOST U.S. TAXES DUE TO ABNORMAL TRADE PRICING - U.S. TOTAL TRADE (Export & Import)

2001 Income Shifted and Federal Income Tax Losses

2001 TOTAL TRADE	Tax Loss @34% (\$ millions)	Income Shifted (\$ millions)
All Countries	\$53,117	\$156,225
Top 25 Ctys	\$49,073	\$144,332
JAPAN	\$12,225	\$35,957
CANADA	\$4,967	\$14,608
FR GERM	\$4,640	\$13,646
MEXICO	\$3,459	\$10,175
U KING	\$3,003	\$8,833
NETHLDS	\$2,628	\$7,731
CHINA	\$2,416	\$7,107
FRANCE	\$1,753	\$5,157
PHIL R	\$1,691	\$4,973
TAIWAN	\$1,507	\$4,431
KOR REP	\$1,504	\$4,423
SINGAPR	\$1,057	\$3,108
HG KONG	\$1,010	\$2,969
ITALY	\$952	\$2,800
IRELAND	\$904	\$2,660
MALAYSA	\$755	\$2,221
AUSTRAL	\$626	\$1,840
BRAZIL	\$609	\$1,792
INDIA	\$606	\$1,781
BELGIUM	\$593	\$1,745
SWEDEN	\$589	\$1,732
SWITZLD	\$487	\$1,433
THAILND	\$456	\$1,342
ISRAEL	\$360	\$1,057
VENEZ	\$275	\$809

DAILY LOST U.S. INCOME TAX REVENUES

\$53,116,638,061/365 = \$145,525,036 PER DAY

CHART B: TOP 25 SOURCES OF LOST U.S. TAXES DUE TO ABNORMAL TRADE PRICING - U.S. EXPORT

2001 Income Shifted and Federal Income Tax Losses

2001 U.S. EXPORT	Tax Loss @34% (\$ millions)	Income Shifted (\$ millions)
All Countries	\$37,832	\$111,272
Top 25 Countries	\$35,221	\$103,591
JAPAN	\$10,154	\$29,864
FR GERM	\$3,475	\$10,221
NETHLDS	\$2,482	\$7,299
CANADA	\$2,375	\$6,987
MEXICO	\$2,365	\$6,954
U KING	\$2,237	\$6,578
PHIL R	\$1,451	\$4,269
FRANCE	\$1,217	\$3,579
KOR REP	\$1,039	\$3,055
CHINA	\$970	\$2,853
HG KONG	\$864	\$2,541
TAIWAN	\$854	\$2,510
SINGAPR	\$836	\$2,459
AUSTRAL	\$555	\$1,632
ITALY	\$503	\$1,478
BELGIUM	\$501	\$1,474
INDIA	\$488	\$1,435
SWEDEN	\$484	\$1,424
BRAZIL	\$483	\$1,420
IRELAND	\$468	\$1,377
MALAYSA	\$419	\$1,233
SWITZLD	\$272	\$801
THAILND	\$271	\$796
ISRAEL	\$245	\$722
NORWAY	\$214	\$630

CHART C: TOP 25 SOURCES OF LOST U.S. TAXES DUE TO ABNORMAL TRADE PRICING - U.S. IMPORT

2001 Income Shifted and Federal Income Tax Losses

2001 U.S. IMPORT	Tax Loss @34% (\$ millions)	Income Shifted (\$ millions)
All Countries	\$15,284	\$44,954
Top 25 Countries	\$13,965	\$41,072
JAPAN	\$2,591	\$7,622
FR GERM	\$2,072	\$6,093
NETHLDS	\$1,446	\$4,254
CANADA	\$1,164	\$3,425
MEXICO	\$1,095	\$3,220
U KING	\$767	\$2,255
PHIL R	\$653	\$1,921
FRANCE	\$537	\$1,578
KOR REP	\$465	\$1,368
CHINA	\$449	\$1,322
HG KONG	\$436	\$1,283
TAIWAN	\$336	\$988
SINGAPR	\$239	\$704
AUSTRAL	\$221	\$649
ITALY	\$215	\$632
BELGIUM	\$186	\$546
INDIA	\$147	\$432
SWEDEN	\$146	\$428
BRAZIL	\$126	\$372
IRELAND	\$120	\$353
MALAYSA	\$118	\$346
SWITZLD	\$116	\$340
THAILND	\$114	\$336
ISRAEL	\$105	\$308
NORWAY	\$101	\$296

CHART D: ABNORMALLY HIGH U.S. IMPORT PRICES

Multiple Vitamins	China	\$ 1,868.77/kg
Plastic Buckets	Czech	\$ 972.98/unit
Fence Posts – Treated	Canada	\$ 1,853.50/meter
Wood Moldings	Bolivia \$ 1,12	4.17/meter
Toilet/Facial Tissue	China	\$ 4,121.81/kg
Briefs and Panties	Hungary	\$ 739.25/doz
Dishtowels of Cotton	Pakistan	\$ 153.72/unit
Other Made-Up Articles	Arab Em	\$ 106.73/unit
Unglazed Tiles – Ceramic	Italy	\$ 4,480.00/sqmtr
Rubies – Cut, Not Set	Burma	\$38,192.30/carat
Bolts – Iron or Steel	France	\$ 3,067.17/kg
Threaded Nuts	Belgium	\$ 2,426.70/kg
Tweezers – Base Metal	Japan	\$ 4,896.00/unit
Lawnmower Blades	Australia	\$ 2,326.75/unit
Razors	UK	\$ 113.20/unit
Air Pumps – Hand/Foot Operated	Malaysia	\$ 5,000.00/unit
Camshafts and Crankshafts	Saudi Arabia	\$15,200.00/unit
Telephone Sets – One Line	Japan	\$ 2,728.00/unit
Unrecorded Magnetic Disks	Denmark	\$ 164.19/unit
Smoke Detectors – Battery Powered	Germany	\$ 3,500.00/unit
Industrial Hand Trucks	Spain	\$ 3,800.86/unit
Hypodermic Syringes	Switzerland	\$ 142.78/unit

CHART E: ABNORMALLY LOW U.S. EXPORT PRICES

Bovine Animals - Live	Mexico	\$	20.65/unit
Multiple Vitamins	Finland	\$	1.34/kg
Dynamite	Canada	\$	1.24/kg
Radial Tires – Bus/Truck	UK	\$	11.74/unit
Diamonds – Not Industrial	India	\$	13.45/carat
Toilets - Bowls with Tanks, one piece	Hong Kong	\$	1.75/unit
Aluminum Ladders	Japan	\$	4.40/unit
Fork-Lifts, Self Propelled	Jamaica	\$	384.14/unit
Industrial Robots	Ireland	\$	324.37/unit
Bulldozers – Self-Propelled	Colombia	\$1	,741.92/unit
Automatic Teller Machines	France	\$	97.00/unit
Trash Compactors	UK	\$	54.82/unit
Video Monitors - Color	Pakistan	\$	21.90/unit
Video Projectors – Color	Brazil	\$	33.95/unit
Road Tractors – For Semi-Trailers	Nigeria	\$3	3,750.00/unit
Truck Caps	Mexico	\$	10.77/unit
Cameras – SLR, 35mm	Colombia	\$	7.44/unit
Clinical Thermometers	Germany	\$.06/unit
Wrist Watches – Cases of Precious Metal	Colombia	\$	8.68/unit
Missile and Rocket Launchers	Israel	\$	52.03/unit
Prefabricated Buildings	Trinidad	\$	1.20/unit
Seats – For Motor Vehicles	Belgium	\$	1.66/unit