

H-RXUQDO RI 7D[5HVHDUFK

YRO

QR

SS

7KH LQIOXHQFH RI UHFLSURF
FRP UH RPSXPHOHOR ORQDJHQJ

&KULV (DQQV7KHXQV 6WH\Q

\$EVWUDFW

5HVHDUFK RQ WKH HIIHFHWV RI QXGJLQJ DV D WRRO WR LQIOXHQFH WD[FRPSOLDQFH
HPSLULFDO HYLGHQFH 8VLQJ D PL[HG PHWKRGV UHVHDUFK GHVLJQ WKLV VWXG
RI WHOHVLVRQ DGYHUWLVHPHQWV RQ WD[SD\HU FRPSOLDQFH LQ 6RXWK \$IULFD
2XU UHVXOWV VKRZ D VWDWLVWLDOO\ VLJQLILFDQW DVVPP ÄD@D\HVW\ P DKR
LQWHUWDO\WD WKH WLPLQJ RI WH
QXGJH PD\ QRW EH LQIOXHQWLDO 7KH VWXG\ H[WHQGV WKH FXUUHQW NQRZOHG
LQFRUSRUDWHG WR DVVLVW LQ LQIOXHQFLQJ WD[FRPSOLDQFH SDUWLFXODUO\ I

.H\ ZRUQND[FRPSOLDQFH QXGJLQJ UHFLSURFLW\ PHVVDJH DWWULEXWHV 6RXW

'HSDUWPHQW RI 7D[DWLRQ)DFXOW\ RI (FRQRPLF DQG 0DQDJHPHQW
\$IULFD PRQDJHQJ#XQVZ DX UDHV SDQGLQJ DXWKRU 7KH DXWKRUUV ZLVI
RI WKLV MRXUQDO DQG WZR DQRQ\PRXV UHYLHZHUV IRU WKHLU KHOSIX
'HSDUWPHQW RI 7D[DWLRQ)DFXOW\ RI (FRQRPLF DQG 0DQDJHPHQW
\$IULFD DQG 816: %XVLQHVV 6FKRRO 8QLYHUVLW\ RI 1HZ 6RXWK
FF HYDQV#XQVZ HGX DX
'HSDUWPHQW RI 7D[DWLRQ)DFXOW\ RI (FRQRPLF DQG 0DQDJHPHQW
\$IULFD WPKDHLXQV VWH\Q#XS DF]D

H-RXUQDO RI 7D[5HVHDUFK

7KH LQIOXHQFH RI UHFLSURFLW\ QXGJHV RQ WD[FRP

,1752'8&7,21

7D[HV DUH DQ LPSRUWDQW FRPSRQHQW RI DQ\ HFRQRP\ SURYLVLRQ RI EDVLF SXEOLF VHUYLFHV DQG JRRGV IRU W ,W LV IRU WKLV UHDVRQ WKDW WD[DXWKRLWLHV KDYH GPLQLVWHULQJ WKH WD[V\VWHP ZKLFK HQWDLOV DPRG WKH RYHUDOO OHYHO\KRW WD\Y ERIIFSRQ\HD\Q\QHLQFUHDVLQJ UHVSRRQVLELOLW\ LQ OLJKW RI WKH GHSHQGHQFH RI PDQ FRQWLQXRXV VHDUFK E\ VRPH \$IULFDQ FRXQWULHV IRU GHSHQGHQFH RQ IRUHLJQ DLG DQG LV OLNHO\ WR EHFRP WKH LPSDFW RI &29,' RQ DOUHDG\ VWUHWFKHG JRYHUQ ,Q VHHNLQJ WR LQFUHDVH OHYHOV RI WD[FRPSOLDQFH W

H-RXUQDO RI 7D[5HVHDUFK

7KH LQIOXHQFH RI UHFLSURFLW\ QXGJHV RQ WD[FRP

WLPH ODJ EHWZHHQ WKH FRPPXQLFDWLRQ RI D QXGJH PH
1XGJH PHVVDJHV PD\ GHFD\ RYHU WLPH LI RYHUODLG ZLW

H-RXUQDO RI 7D[5HVHDUFK

7KH LQIOXHQFH RI UHFLSURFLW\ QXGJHV RQ WD[FRP

/ ,7(5\$785(5(9,:)

5HVHDUFK KDV FRQVLVWHQWO\ VKRZQ WKDW LQGLYLGXDO
RI IDFWRUV VXFK DV WKRVH WKDW VWHP IURP JURXS FRQ
QRUPV DOWUXLVP UHFLSURFLW\ WUXVW WD[PRUDOH
HVWDEOLVKHG WKDW SHRSOH\ EHOLHIV FDQ EH LQIOXHO
UHJDUGLQJ QRUPV &DVWUR 6FDUWDVFLQL 7KH XV
WKURXJK OHWWHUV WHOHYLVLRQ RU RWKHU PHGLD WR
VKDUH RI WD[HV FDQ EH VHHQ DV QXGJLQJ WD[SD\HUV
FRPSO\LQJ ZLWK WKHLU WD[REOLJDWLRLQV

7KHUH KDV EHHQ D VVHDG\ LQFUHDVH LQ WKH QXPEHU R
WD[SD\HUV PHVVDJHV WKDW PD\ KDYH D SRVLWLYH LQIOX
&\DQ .RXPSLDV ODUWLQH] 9D]TXH])HOOQHU 6DX
*DOOHJR 2UWHJD .RXPSLDV ODUWLQH] 9D]TXH]
6WXGLHV WKDW KDYH IRFXVHG VSHFLILFDOD\ RQ VH
WKRVH RI \$ULHO %OXPHQWKDO HW DO %R
6FDUWDVFLQL +DOOVZRUWK HW DO DQG 0DVF

6HQGLQJ WD[SD\HUV UHFLSURFLW\ PHVVDJHV DV D QXO
EHKDYLRXU E\ LQFUHDVLFQJ SHUFHLYHG GLVWULEXWLRQDC
DQG .LUFKOHU WD[SD\HUV\ ZLOOLQJQHVV WR FRPS
UHGXFHG ZKHQ WD[SD\HUV SHUFHLYH WKHLU FRQWULEX
XQEDODQFHG ZKHQ FRPSDUHG ZLWK WKH JRRGV UHFHLYH
SHUFHLYHG GLVWULEXWLRQDO IDLUQHVV PD\ KDYH D SRV
DQG WD[FRPSOLDQFH DWWLWXGHV 9HUERRQ *RVOLQJD

6WXGLHV WKDW KDYH IRFXVHG RQ FRPPXQLFDWLQJ UHF
LQFRQFOXVLYH UHVXOWV 6RPH %RWW HW DO 2UWH
SRVLWLYH LQIOXHQFH ZKLOVW RWKHUV \$ULHO %OX
HIIHFW RI UHFLSURFLW\ PHVVDJHV RQ WD[FRPSOLDQFH E

:KLOVW WKH VVXGLHV GHVSLWH FRQWUDVWLQJ RXWFRP
UHFLSURFLW\ QXGJLQJ RQ WD[FRPSOLDQFH D YHU\ OLPL
FRQGXFWHG LQ GHYHORSLQJ FRXQWULHV SDUWLFXODU
LPSRUWDQW ZKHQ LQYHVWLJDWLQJ WKH HIIHFWLYHQHVV
FQL GRQB\H RWKWKH NQRZQ VVXGLHV FRQGXFWHG LQ DQ \$IUL
UHJDUGWQU PWRPH J\AQISXW RI QXGRJPH\RHQW\JHV RQ WD[FR
0DVFDJQL DQG 1HOO LQ 5ZDQGD 6DQWRUR DQG 0D
6DQWRUR HW DO LQ (VZDWLQL 0DVFDJQL DQG 1HOO
QXGJH PHVVDJHV ZHUH VPR\B\UH\IHE\WB\YH\WZKHDQQ G\IW HQ\QH\Q

H-RXUQDO RI 7D[5HVHDFK

7KH LQIOXHQFH RI UHFLSURFLW\ QXGJHV RQ WD[FRP

5HVHDFK VKRZV WKDW GHOLYHULQJ D PHVVDJH LUUVSH
KRZHYHU JXDUDQWHH WKDW WKH WDUJHWHG DXGLHQFH Z
7VFKLUKDUW ,Q RUGHU WR EH HIIHFWLHY PHVVDJ
WDUJHWHG DXGLHQFH 7KH VWUXFWXUDO DQG FRQWHQW
WR EH OLQNHG WR JUHDW DWWHQWLRQ PHPRU\ DQG OL
LPSRUWDQW DVSHFWV RI DQ HIIHFWLHY PHVVDJH 0RUJDQ
7KH QDWXUH RI WKH SXEOLF JRRG RU VHUYLFH FRPPXQLF
ZLWK UHJDUG WR ZKHWKHU WKH UHFLSURFLW\ QXGJH PH
&RPPXQLFDWLRQ RI GLIIHUHQW W\SHV RI SXEOLF JRRGV
UHVSQRQHV WR WKH QXGJH IRU GLIIHUHQW WD[SD\HUV \$
WKDW WD[SD\HUV DUH PRUH OLNHO\ WR KDYH D WD[FRPS
VSHFLILF SXEOLF JRRGV RU VHUYLFHV SURYLGHG E\ WKH
RI 2EHUKRO]HU GH .RFN DQG :DONHU ZKR H[DPLQHG

H-RXUQDO RI 7D[5HVHDUFK

7KH LQIOXHQFH RI UHFLSURFLW\ QXGJHV RQ WD[FRP

7DEOH 3UHYLRXV 6WXGLHV 5HYLHZHG

| | | | | |
|-------------------|--|-----------|---------|-------------------------------|
| \$XWKRU | 7LWOH | <HDU SDJH | SXE UDQ | 'LVFLSOLQH |
| \$OEHUW DQG %X | +HDUWV RGHPOVQG SHUVXDVLYH PHV FOLPDWH FKDQJH | | SS | &OLPDWH FKDQJH |
| %DWRU &LDOGL | 7KH DSSOLF DWLR WKHRU\ WR WKH HIIHFWLH SURH SXEOLF VHUYLF | | SS | (QYLURQPHQWDO &RQVHUYDWLRQ |
| +RHNVW :HJPQ | ,PSURYLQJ WKH HIIHFWLH QHVV RI | | | |

H-RXUQDO RI 7D[5HVHDUFK

7KH LQIOXHQFH RI UHFLSURFLW\ QXGJHV RQ WD[FRP

7DEOH 6WUXFWXUDO DQG &RQWHQW \$WWULEXWHV RI DC

| | |
|-----------------|---|
| \$WWUL | EKHWHULSWLRQ SHU OLWHUDWKHDXWUH RI DW WULEXWH |
| &DSWXI | 7KH PHVVDJH VKRXOG KID SWXURHU & FWWXHQDWLRQ FRORXU PRYHPHQW YLVXDODW WQLREUXPDHWLRQ TXD DW WHQ DQG PXVDFVEDW ZLWK WKLV |
| 1HZ LQIRUPDWLRQ | 7KH PHVVDJH VKRXOG HPSKD&RQWHLOQMRUPDWLRQ QHZ WR WKH WDUJHW DXGLHDQWMIDQEGXWKDW LV HV EHKDYLRXI (YRNHV 7KH PHVVDJH VKRXOG HYRNNH&RQWMQRWQ HPRWLRQ DW WULEXWH |

H-RXUQDO RI 7D[5HVHDUFK

7KH LQIOXHQFH RI UHFLSURFLW\ QXGJHV RQ WD[FRP

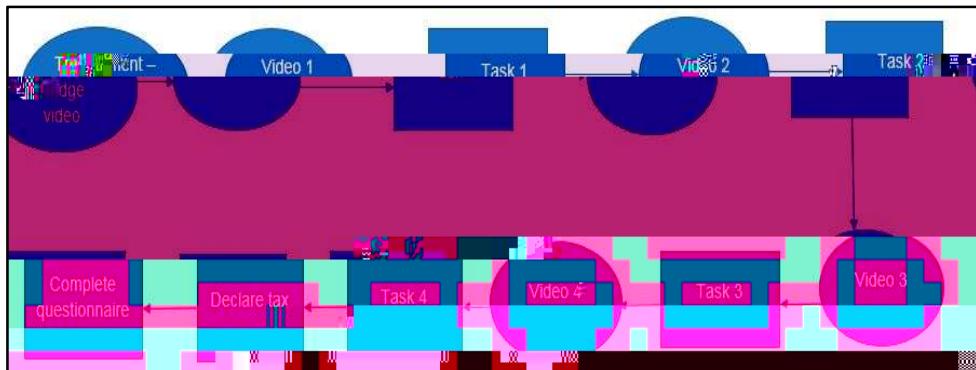
W L WUHDP L Q JD%QIGJ WKH RWKHU ZDV K\SRWKHVLVHG DV OHD

H-RXUQDO RI 7D[5HVHDUFK

H-RXUQDO RI 7D[5HVHDUFK

7KH LQIOXHQFH RI UHFLSURFLW\ QXGJHV RQ WD[FRP

)LJ 7UHDWPHQW *URXSV % DQG % 7LPH /DJ



7KH H[SHULPHQW ZDV FRQGXFWHG 4XQD@WRPSHQFH ODERU
FRPPHQFHPHQW ZLWK WKH H[SHULPHQWDO WDVNV SDU
SURFHGXUHV RI WKH H[SHULPHQW 3DUWLFLSDQWV ZH
FRQILGHQWLDOOLW\ RI WKHLU UHVSRRQVHV DQG WKDW WKH
QRW EH REVHUYHG E\ WKH UHVHDUFKHU RU WKH DVVLVWD
OLPLW SRWHQWLDO VRFLDO GHVLUDELOLW\ ELDV 3DU
H[SHULPHQW UHODWHG WR WD[FRPSOLDQFH UDLVLQJ W
DGGUHVVHG E\ GHEULHILQJ SDUWLFLSDQWV RQ WKH WU
FRPSOHWLRQ RI WKH H[SHULPHQW DQG SURYLGLQJ WKHP
LQIRUPDWLRQ ZDV LQLWLDOO\ ZLWKKHOG VHH \$SSHQG
SDUWLFLSDQWV WKDW WKHLU UHVSRRQVHV ZRXOG EH NH
UHVHDUFK SXUSRVHV RQO\

5(68/76

,Q WKH DQDO\VLV WKDW IROORZV GHVFULSWLYH VWDWLV
IROORZHG E\ SUHVHQWDWLRQ XVLQJ ORJLVWLF UHJUHV
PHVVDJHV RQ WD[FRPSOLDQFH EHKDYLRXU 5HVXOWV UH
PHVVDJHV DUH DOVR FRQVLGHUHG

'HVFULSWLYH VWDWLVWLFV

7DEOH SURYLGHV D VXPPDU\ RI GHPRJUDSKLF GDWD D
SDUWLFLSDQWV LQ WKH H[SHULPHQW 3DUWLFLSDQWV ZH
VL[FDWHJRULHV SURYLGHG LQWR ZKLFK WKH\ IHOO \$ F
ZHUV LQ WKH WR DJH JURXS ZKLFK ZDV WR EH H[SHF
ZHUV WDUJHWVG IRU UHFUXLWPHQW WR WKH H[SHULPHQW
IHOO LQWR WKH WR DJH JURXS 1RQH RI WKH SDUWL
JURXS FDWHJRULHV 7KH PDMRULW\ RI WKH SDUWLFLSD
IHPDOH FRPSDUHG WR PDOHV 3UHYLRXV UHVHDUFK
PRUH FRPSOLDQW WKDQ PDOHV %RWW HW DO KR
GLIIHUHQFH LQ WD[FRPSOLDQFH DWWLWXGHV EHWZHHQ
\$OWKRXJK WKH UHVXOWV ZLWK UHJDUG WR JHQGHU DQG
UHSUHVHQWDWLRQ RI IHPDOHV FRPSDUHG WR PDOHV LQ R
RI WD[FRPSOLDQFH :H WKHUHIRUH WHVWHG IRU GLIIHUH

H-RXUQDO RI 7D[5HVHDUFK

7KH LQIOXHQFH RI UHFLSURFLW\ QXGJHV RQ WD[FRP

H-RXUQDO RI 7D[5HVHDUFK

7KH LQIOXHQFH RI UHFLSURFLW\ QXGJHV RQ WD[FRP

\$Q H[SORUDWRU\ IDFWRU DQDO\VLV ZLWK SULQFLSDO D[L
FRQGXFWHG WR GHWHUPLQH ZKHWKHU WKH SDUWLFLSDQW
UHGXFHG WR RQH IDFWRU GHVFULEHG DV DWWLWXGH WR
IDFWRULQJ ZDV WKDW WKH DWWLWXGH WRZDUGV WD[VV
IDFWRKUH~~R~~UH~~R~~UH WKH IRXU VWDWHPHQWV ZHUH NSHW DV

7DEOH VKRZV WKH PLQLPXP PD[LPXP PHDQ DQG VWDQG
SDUWLFLSDQWV\ DWWLWXGHV WRZDUGV WD[7KH ZLGH G
ILUVW VWDWHPHQW DQG WKH RWKHU WKUHH VWDWHPHQW
VWDWHPHQWV ZHUH SKUDVHG 6WDWHPHQW ZDV SKUDVH
ZHUH SKUDVHG QHJDWL~~Y~~HO\

7DEOH 3DUWLFLSDQWV\ \$WWLWXGHV 7RZDUGV 7D[

| 1XPEH | 6WDWHPHQW | OLQ PXP | OD[PXP | 0HD | 6' | |
|-------|---|------------|------------|-----|----|--------------|
| | &LWLJHQV PXVW SD JRYHUQPHQW LQ RU WR GHYHORS 8QGHUUHSRUWLQJ F KXUW VRFLHW\ DV D | | | | | WKH WU\ W |

H-RXUQDO RI 7D[5HVHDUFK

7KH LQIOXHQFH RI UHFLSURFLW\ QXGJHV RQ WD[FRP

7DEOH 3DUWLFLSDQWV\ 3HUFHSWLRQV RI &RUUXSWLRQ

| 1XPEH | 6WDWHPHQ | 0LQ PXP | 0D[L XP | 0HDC | 6' |
|-------|---|------------|------------|------|----|
| | 7KH OHYHO RI F LQYROYLQJ KLJ RIILFLDOV LV K | | | | |
| | 7KH OHYHO RI F LQYROYLQJ KLJ JRYHUQPHQW R KLJK | | | | |
| | 7KOHYHO RI FR RXU FRXQWU\ L | | | | |

7D[FRPSOLDQFH ZDV PHDVXUHG E\ FRQGXFWLQJ D FRPS
UHSRUWHG E\ WKH SDUWLFLSDQWV DQG WKH LQFRPH HDU
YDULDEOH WD[FRPSOLDQFH ZDV LI D SDUWLFLSDQW U
DQG LI LQFRPH ZDV WUXWKIXOO\ UHSRUWHG 7KHUH ZH
LQFRPH H[FHHGHG WKH DPRXQW HDUQHG 7KHVH SDUWLFL

7DEOH VKRZV WKH WD[FRPSOLDQFH UDWHV RI SDUWLFL
LQ WKH WUHDWPHQW JURXSV

7KH WD[FRPSOLDQFH UDWH RUHSODPULQW\ H[SDQWV\ LHW\ S RXIGQH
PHVVDJH ZDV FRPSDUHG WR IR\\$OSRDW\KAHLUF\LS DRQWH\ H[
UHFLSURFLW\ QXGJH PHVVDJH DQG IRU SDUWLFLSDQW
7KLV VXJJHVWV WKDW WKRVH SDUWLFLSDQWV ZKR UHFH
FRPSOLDQW WKDQ WKRVH ZKR GLG QRW

H-RXUQDO RI 7D[5HVHDUFK

7KH LQIOXHQFH RI UHFLSURFLW\ QXGJHV RQ WD[FRP

7DEOH 7D[&RPSOLDQFH 5DWHV DQG ,QFRPH 'HFODUDWL

H-RXUQDO RI 7D[5HVHDUFK

7KH LQIOXHQFH RI UHFLSURFLW\ QXGJHV RQ WD[FRP

D FHUWDLQ YDOXH RU ODUJHU WKDQ D FHUWDLQ YDOXH
UHJUHVVLRQ RU 7RELV DQDO\VLV ZDV QRW GHHPHG DSS
FRXOG RQO\ WDNH RQ GLVWLQFW YDOXHV

H-RXUQDO RI 7D[5HVHDUFK

7KH LQIOXHQFH RI UHFLSURFLW\ QXGJHV RQ WD[FRP

)RU WKH QXGJH YLGHR VHOHFWHG \$ \ V R F V R I Q H M D T L V Q L R Q J H W K H
&KL VTXDUH WHVW IRU LQGHSHQGHQFH ZDV FRQGXFWHG
GLIIHUHQFH LQ WKH WD[FRPSOLDQFH EHKDYLRXU RI SDU
QXGJH PHVVDJH LPPHGLDWHO\ EHIRUH PDNLQJ WKH WD[
ZKR KDG D WLPH ODJ EHWZHHQ YLHZLQJ WKH YLGHR DQG
\$OWKRXJK WKH UHVXOWV VKRZHG WKDW RI WKH SDU
QR WLPH ODJ ZHUUH FRPSOLDQW FRPSDUHG WR LQ W
VWDWLWLFDOO\ VLJQLILFDQ\\$ YGLO\ XH J HQFH ZDV IRXQG W
,Q VXPPDU\ WKH UHVXOWV LQGLFDWHG WKDW WKHUH ZDV

H-RXUQDO RI 7D[5HVHDUFK

7KH LQIOXHQFH RI UHFLSURFLW\ QXGJHV RQ WD[FRP

7KH UHVXOWV KDYH DOVR LQGLFDWHG WKDW WKHUH LV
FRPSOLDQFH EHKDYLRXU RI LQGLYLGXDOV H[SRVHG WR D
PDNLQJ WKH WD[FRPSOLDQFH GHFLVLRQ DQG WKRVH ZKF
WR D QXGJH PHVVDJH DQG PDNLQJ WKH WD[FRPSOLDQFH
WR WKRVH RI *LOOLW]HU DQG 6LQQQLQJ 1RWH KRZHY
DUWLFOH PD\ EH DFFRXQWHG IRU E\ WKH GLIIHUHQW ZD\
WHVWHG IRU DQG SDUWLFXODUO\ WKH XVH RI GLVWUDFW
FDQ EH SUDFWLFDOO\ WHVWHG E\ YDU\LQJ WKH WLPH EV
FXUUHQW VWXGI KRZHYHU DGYHUWLVPHQW YLGHGV ZHU
EH DUJXHG WR KDYH LQIOXHQFHG WKH HIIHFWLYHQHVV RI

\$SDUW IURP WKH OLPLWDWLRQ UHODWHG WR WKH PDQQH
WHVWHG WKHUH DUH RWKHU OLPLWDWLRQV WR WKLV VW
ILUVW OLPLWDWLRQ UHODWHV WR WKH QDWXUH RI WKH
\$OWKRXJK WKHUH KDV EHHQ FULWLFLVP RI WKH XVH R
H[SHULPHQWV &KRR)RQVHFD 0\OHV WKH UHVHDU
DSSURSULDWH WR XVH VWXGHQWV DV SDUWLFLSDQWV J
YDOLGLW\ RI WKH XVH RI VWXGHQWV DV SDUWLFLSDQWV
OF.HH IRXQG QR VLJQLILFDQW GLIIHUHQFH LQ WD[F
SDUWLFLSDQWV DQG QRQ VWXGHQW SDUWLFLSDQWV)XU
VWDWH WKDW HYLGHQFH VXJJHVWV WKDW WKHUH LV QR
H[SHULPHQWV ZKHQ FRPSDUHG WR QRQ VWXGHQW SDUWL
EHOLHYH WKDW WKH FRJQLWLYH SURFHVVHV RI VWXGHQ
SHRSOHT 1RQHWKHOHVV WKH ILQGLQJV FDQQRW UHDG
SRSXODWLRQ RI LQGLYLGXDO LQFRPH WD[SD\HUV JLYHQ
GLIIHUHQW GHPRJUDSKLF DQG EHKDYLRXUDO FKDUDFWH
REVHUYHG LQ WKLV VWXGI)XUWKHUPRUH RXU VWXGHQ
SRVW KLJK VFKRRQ HGXFDWLRQ ZKLFK PD\ QRW EH UHS
WD[SD\HUV)XWXUH UHVHDUFK FRXOG WKHUHIRUH EH F

6HFRQGO\ WKH VWXG\ IRFXVHG RQ WKH XVH RI UHFLSUR
DXGLRYLVXDO PHGLD DQG WKH HIIHFWLHYHQHVW RI VXFK C
RWKHU PRGHV RI GHOLYHU\ ZDV QRW LQYHVWLJDWHG 2W
RI VRFLDO PHGLD SODWIRUPV UDGLR DQG ELOOERDUGV

1RWZLWKVWDQGLQJ WKHVH OLPLWDWLRQV WKH UHVHDUF
UROH WKDW DSSURSULDWHO\ FUDIWHG UHFLSURFLW\ PH\
FRPSOLDQFH LQ D GHYHORSLQJ FRXQWU\ VHWWLQJ

5() (5 (1 & (6

\$OEHWVRQ % %XVE\ - : μ+HDUWV RU PLQGV" ,GHQWLILC
FKDQ5IHI\ HDUFK DQYGROROL\WRFV SS

\$OL 0)MHOGVWDG 2 + 6MXUVHQ , + μ7R SD\ RU QRW WR S
LQ .HQ\D 7DQ1DQLD 8JDQGD DQG 6RXWK \$IULFD†

H-RXUQDO RI 7D[5HVHDUFK

7KH LQIOXHQFH RI UHFLSURFLW\ QXGJHV RQ WD[FRP

\$OP - OF.HH 0 μ([WHQGLQJ WKH OHVVRQV RI ODERUDWRU
PDQDJHULDO DQG GBLQVWRIQLHDFORQRQGLFHVPLRDRQ (FQRQ RPLFSVS

\$OP - %ORRPTXLVW . 0 OF.HH 0 μ:KHQ \RX NQRZ \RXU QHLJ
SHHU HIIHFVW DQGLWEDQFQFMSKOLHQFCR SS

\$QWLQ\DQ \$ \$VDWU\DQ = μ1XGJLQJ IRU WD[FRPSOLDQFH
3DSHU 1R \$YDLODEOH DW KWWSV SDSHUV VVUQ FRP VF

\$ULHO % μ'HWHUUHQFH DQG PRUDO SHUVXDVLRQ HIIHFVW RQ
UDQGRPL]HG FRLQWLRQ QMRSQWULQCR SS

H-RXUQDO RI 7D[5HVHDUFK

7KH LQIOXHQFH RI UHFLSURFLW\ QXGJHV RQ WD[FRP

)HO OQHU * 6DXVJUXEHU 5 7UD[OHU & μ7HVWLQJ HQIRUFHF
DSSHDO DQG VR F-LRDXOU QQ DR BP DWKLRQ XURSHDQY RFOR QR PQR \$VVRFL
SS

*DOOHJR - 2UWHJD) μ&DQ)DFHERRN DGV DQG HPDLO P
([SHULPHQWDO HYLGHQFRHQ RUPRLF 9HHQHHQXISOBHQ W DQG &XOWXUDC
QR SS

*LOOLW]HU & 6LQQLQJ 0 μ1XGJLQJ EXVLQHVHV WR SD\ W

H-RXUQDO RI 7D[5HVHDUFK

7KH LQIOXHQFH RI UHFLSURFLW\ QXGJHV RQ WD[FRP

\$33(1', & (6

\$33(1',; \$ (3(5,0(17 ± ,16758&7,216

,QWURGXFWLRQ

7KDQN \RX IRU \RXU SDUWLFLSDWLRQ LQ WKLV H[SHULPH
DSSUR[LPDWHO\ PLQXWHV WR FRPSOHWH 7KH H[SHULP
RI DGYHUWLVHPHQWV 7KH UHVHDUFKHU LV >QDPH UHPRY
LQVWLWXWLRQ UHPRYHG@

,Q WKLV H[SHULPHQW \RX ZLOO EH H[SHFWHG WR YLHZ
DWWHQWLQZ KHQ YLHZLQJ HDFK RI WKH YLGHGV EHFDXV
UHTXLUGH WR SHUIRUP D WDVN ZKLFK HQWDLOV DQVZHUL
<\RX ZLOO HDUQ ODERUDWRU\ FUHGLWV ZKLFK FDQ EH F
H[SHULPHQW IRU HDFK FRUUHFW DQVZHU \$IWHU \RX KDY
DOO WKH UHODWHG TXHVWLRQV \RX ZLOO EH WROG KRZ P
PDQ\ UDQG \RX KDYH HDUQHG DV D UHVXOW RI \RXU SDU
WR GHFODUH \RXU HDUQLQJV DV ZH QHHG WR ZLWKKROG
SXUSRVHV

<\RXU SDUWLFLSDWLRQ LQ WKH H[SHULPHQW ZLOO UHPDL
ZLOO EH WUHDWHG DV VWULFWO\ FRQILGHQWLDO DV \RX

H-RXUQDO RI 7D[5HVHDUFK

7KH LQIOXHQFH RI UHFLSURFLW\ QXGJHV RQ WD[FRP

WR GHFODUH \$IWHU \RX KDYH GHFODUHG \RXU LQFRPH H
VHOHFWHG IRU DQ DXGLW DQG LI XQUHSRUWHG LQFRPH LY
XQGHFODUHG DPRXQW ZLOO EH LPSRVHG 7KHUH LV D S
IRU DQ DXGLW 7KH FRPSXWHU VRIWZDUH ZLOO UDQGRPO
FKHFN WKHLU DFWXDO LQFRPH VFRUH DJDLQVW WKH G
LQFRPH <RX ZLOO EH QRWLILHG RQ WKH FRPSXWHU VFU
DXGLW

<RXU GHFLVLRQ RQ WKH DPRXQW RI LQFRPH HDUQHG WR
LQFRPH DIWHU WD[DPRXQW \$FFRUGLQJO\ \RXU WRWDO
GHFLVLRQ RQ KRZ PXFK RI \RXU WRWDO HDUQLQJV WR GH
SHQDOW\ UDWH

ODWKHPDWLFDOO\ \RXU WRWDO LQFRPH DIWHU WD[FDQ E
7RWDO LQFRPH HDUQHG ± WD[RQ LQFRPH GHFODUHG ± X
7KHVH ZLOO RQO\ DSSO\ LI \RX KDYH EHHQ VHOHFWHG IR
7KH ILQDO SDJH RI WKH VXUYH\ H[SHULPHQW ZLOO LQGLF
QRW 7KH LQFRPH DIWHU WD[DPRXQW FRQYHUWHG LQW
ZLOO EH \RXUV WR NHHS DQG ZLOO EH SDLG RXW WR \RX
:KHQ \RX UHDFK WKH SD\RXW SDJH SOHDVH HQVXUH WKDW
x 5DLVH \RXU KDQG VR WKDW WKH DVVLVWDQW FDQ FRPH
x 6KRZ WKH DVVLVWDQW \RXU VWXGHQW FDUG
x 7KH DVVLVWDQW ZLOO ZULWH GRZQ KRZ PXFK KH RU V
FRUUHVSRRQG WR WKH SD\RXW DPRXQW RQ WKH FRPSXW
x 6LJQ WKH OLVW QH[W WR \RXU QDPH WR FRQILUP WKH
WKH PRQH\
x <RX ZLOO WKHQ UHFHLYH D GHEULHILQJ OHWWHU
3OHDVH OHDYH DOO PDWHULD OV RQ \RXU GHVN
7KDQN \RX

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, ZRXOG OLNH WR WKDQN \RX IRU WDNLQJ SDUW LQ WKLV
VWXG\ UHODWHV WR PHPRU\ DQG DGYHUWLVPHQWV KRZ
ZKDW ZH KDYH WROG \RX DERXW VR IDU 6RPHWLPHV LQ

