

3KDUPDFR7QRORJ\)+H3FKDU\$Q7JHOD 6

, Q V W U X F W L R Q B O S ' Q D M L S O L Q H 7

7DEOH RI &RQWHQWV

\$ 3URJUDP ,QIRUPDWLRQ
%)7(6 (QUROOPHQW 7UHQGV
& 6HFWLRQV (QUROOPHQW 7UHQGV
' 3URGXFWLYLW\ (QUROOPHQW 7UHQGV
((QUROOPHQW E\ 6WXGHQW 'HPRJUDSKLFV
) 6WXGHQW &RXUVH 6XFFHVV
* 6WXGHQW &RXUVH 6XFFHVV E\ 'HPRJUDSKLFV

\$ 3URJUDP ,QIRUPDWLRQ

* h] Nh; Z í Pi P[í. k; kZ H[k

3OHDVH HQWHU \RXU PLVVLRQ VWDWHPHQW KHUH

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7KH 3+7 3URJUDP SURYLGHV DGYDQFHG OHYHO WUDLQLQJ E\ HPSRZHULQJ VWXGH
H[FHHGLQJ WKH UHTXLUHPHQWV WR EHFRPH D VWDWH UHJLVWHUHG WHFKQLFDQ
JUDGXDWHV LQGLYLGXDOV WUDQVLWLRQLQJ IURP RWKHU SURIHVVLRQV RU UH HG
UHLQIRUFHG LQ ODERUDWRU\ DQG FOLQLFDO H[WHUQVKLSV ZKHUH VWXGHQWV GH
SKDUPDFHXWLFDO SUHSDUDWLRQ DQG GHOLYHU\ RI TXDOLW\ SDWLHQW FDUH UHT
WUXVW DQG LQWHJULW\ DUH IRXQGDWLRQDO WR WKH SURJUDP DQG SURIHVVLRQ

* h] Nh; Z í HqHY. k FH[kí H; h[P Ní"

%)7(6 (QURUOPHW 7

,Q WKH GDWD WDEOH DERYH ZKDW GRHV WKH)7(6 GDWD WUHQG

- WKH GDWD WUHQG VKRZV DQ LQFUHDVH LQ)7(6
- WKH GDWD WUHQG VKRZV D GHFUHDVH LQ)7(6
- WKH GDWD WUHQG VKRZV QR FKDQJH LQ)7(6

'LVFXVV WKH IDFWRUV WKDW ZRXOG KHOS WKH FROOHJH XQGHUVWD IRU WKH LQFUHDVH RU GHFUHDVH

[ir H©

7KH VLQJOH FRKRUW PRQWK SURJUDP HQUROOPHQW LV EDVHG RQ WKH LQLWLDL VWDUW DQG RWKHU SUHVXUHV FRQWULEXWLQJ WR DWWULWLRQ 5HDVRQV IRU G FRQIXVLQJ WKH WR QDYLDJWH IRU QHZ VWXGHQWV WRWDO RI TXDOLILHG DSSOL DSSOLFDQWV)7(6 SURJUDP FRXUVH ORDG ULJRU LQFUHDVHV DWWULWLRQ IRU FHUWDL LQWHUQDWLRQDO VWXGHQWV ORQJ GLVWDQFH FRPPXWHUV 3RRU DFDGHPLF SHU SURJUDP 6LQJOH FRKRUW PRGHO GRHV QRW DOORZ IRU UHSHQLVKPHQW RI)7(6

/RRNLQJ DW WKH GDWD WUHQG FKHFN WKH SURSRVHG DFWLRQV WR V\

- \HV
- QR

,I \HV GHVFULEH WKH SURSRVHG DFWLRQV IRU VWDELOL]LQJ LQFUH

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:RUN ZLWK PDUNHWLQJ RXWUHDFK WR ,PSURYH PDUNHWLQJ VWUDWHJLHV)+ 3+ RWKHUWFMLYH DGYHUWLVLQJ PHGLXPV \$WWHQQ UHJLRQ DQG XQWUXFLKRRHQ WWHFYHODW\ &ROOHJH ,Q UHDFK HYHQWV IHHFVLHYHQW WPHSVRQGG WR V\ DSSOLFDQW TXHVWLRQV U LQFUHDVH UHWHQWLRQ 5HVWUXFWXUH FRXUVH 3UHTXLHQF LQJ \$ORH EHQWDDV HQXQLW\ DFFUHGLWHG (QWU\ PRQWK \$GYDQFHG PRQWK 3+7 SURJUDPV &UHDWH GXDO H +6 VWXGHQWV ,PSURYH FKDQJH FROOHJH ZHEVLWH WR GHFUHDVH FRQIXVLRQ I DFFHVVLELOLW\

& 6HFWLRQV (LQURGOMPHQW 7

,Q WKH GDWD WDEOH DERYH ZKDW GRHV WKH GDWD WUHQG LQGL

- WKH GDWD WUHQG VKRZV DQ LQFUHDVH LQ VHFWRQV
- WKH GDWD WUHQG VKRZV D GHFUHDVH LQ VHFWRQV
- WKH GDWD WUHQG VKRZV QR FKDQJH LQ VHFWRQV

,I WKH GDWD WUHQG VKRZV DQ LQFUHDVH RU GHFUHDVH LQ VHFWRQ GHFUHDVHG

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1 \$ ^3+7 SURJUDP RQO\ KDV RQH VHFWRQ ZLWK RQH FRKRUW SHU \HDU

,I WKH GDWD LQGLFDWHV DQ LQFUHDVH LQ VHFWRQV ZLWK D GHFU LQFUHDVHG ZKLOH)7(6 GHFUHDVHG

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1 \$

' 3URGFWLYLW\UH(QGROOPHQW 7

,Q WKH GDWD WDEOH DERYH ZKDW GRHV WKH GDWD WUHQG LQGL

- WKH GDWD WUHQG VKRZV WKH SURGFWLYLW\ QXPEHU LQFUHDVHG
- WKH GDWD WUHQG VKRZV WKH SURGFWLYLW\ QXPEHU GHFUHDVHG
- WKH GDWD WUHQG VKRZV QR FKDQJH LQ WKH SURGFWLYLW\ QXPEHU

,I WKH GDWD WUHQG VKRZV DQ LQFUHH\SHO BRUQGZHFUWDMHSURGSXFRGLYH
GHFUHDVHG

[ir Hh@

3URGXFWLYLW\ IOXFWXDWHV EHFDXVH RI HQUROOPHQW DQG ZLOO EH ORZHU WKD
,QVWUXFWRU FODVV VLJH UDWLR GHVLJQDWHG E\ 37(& \$6+3 \$&3(\$FFUHGLWDWLRQ
VWHULOH FRPSRXQGLQJ ODE &RKRUW DOVR OLPLWHG WR VWXGHQWV EHFDXVH
H[WHUQVKLS VLWHV 7KH SURJUDP FXUUHQWO\ KDV VL[3+7 /DERUDWRU\ FRXUVI
ZKLFK DOO KDYH KLJK ORDG YDOXHV 'HFUHDVH VWXGHQW HQUROOPHQW GXH W
SHUIRUPDQFH ORQJ FRPPXWH DFFHVVLELWLW\

'RHV WKH GDWD WUHQG VXJJHVV FKDQJHV DUH QHFHVVDU\ WR LP

- \HV
- QR

,I \HV GHVFULEH WKH SURSRVHG DFWLRQV IRU VWDELOL]LQJ LQFUH

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,QFUHDVH DSSOLFDEQW ZLWKRDPHQWLQJ RXWHWLFK DQGLYPSWPHQWUHHIFUXLWPI
DWWHQGDQFH WR 2XWUHDFK ,Q UHDFK HYHQWV²UHGHVLJQ FROOHJH ZHEVLWH WR
VXSSRUW WR KHOS DGGUHV SURVSHFWLYH VWXGHQW SURJUDP TXHVWLRQV \$FT>
LQVWUXFWLRQ 0RYHG KLJK SURGXFWLYLW\ SKDUPDFRORJ\ FRXUVH %,2/ WR D
PRQWK \$GYDQFHG OHYHO FXUULFXOXP GHFUHDVHG WRWDO XQLWV IURP XQLW
(QWU\ /HYHO \$FFUHGLWHG 3+7 &HUWLILFDWH XQLWV 6WDFNDEOH GXDO HQUR
XQLWV %DVLF 3+7 XQLWV

((QUROOPHQW E\ 6WXGHQW 'HPRJUDSK

(QUROOPHQW 'LVWULEXWLRQ



; 1 [h] YZ H[kÍt í H[FHh

7KH IROORZLQJ TXHVWLRQV FRQFHUQ HQUROOPHQW GLVWULEXWLRQ E\ JHQGHU

,Q WKH GDWD WDEOH DERYH ZKDW GRHV WKH GDWD WUHQG LQGL

)HPDOHV

- WKH GDWD WUHQG VKRZV DQ LQFUHDVH LQ WKH IHPDOH HQUROOPHQW UDWHV
- WKH GDWD WUHQG VKRZV D GHFUHDVH LQ WKH IHPDOH HQUROOPHQW UDWHV
- WKH GDWD WUHQG VKRZV QR FKDQJH LQ WKH IHPDOH HQUROOPHQW UDWHV

ODOHV

- WKH GDWD WUHQG VKRZV DQ LQFUHDVH LQ WKH PDOH HQUROOPHQW UDWHV
- WKH GDWD WUHQG VKRZV D GHFUHDVH LQ WKH PDOH HQUROOPHQW UDWHV
- WKH GDWD WUHQG VKRZV QR FKDQJH LQ WKH PDOH HQUROOPHQW UDWHV

C1 [h] YZ H[k]Ct í kQ] PDRt

7KH IROORZLQJ TXHVWLRQV FRQFHUQ HQUROOPHQW GLVWULEXWLRQ E\ HWKQLFLW\

,Q WKH GDWD WDEOH DERYH ZKDW GR WKH GDWD WUHQQV LQGLF

\$IULFDQ \$PHULFDQ

- WKH GDWD WUHQQ VKRZV DQ LQFUHDVH LQ WKH \$IULFDQ \$PHULFDQV HQUROOPHQW
- WKH GDWD WUHQQ VKRZV D GHFUHDVH LQ WKH \$IULFDQ \$PHULFDQV HQUROOPHQW
- WKH GDWD WUHQQ VKRZV QR FKDQJH LQ WKH \$IULFDQ \$PHULFDQV HQUROOPHQW U

\$VLDQ

- WKH GDWD WUHQQ VKRZV DQ LQFUHDVH LQ WKH \$VLDQ HQUROOPHQW UDWHV
- WKH GDWD WUHQQ VKRZV D GHFUHDVH LQ WKH \$VLDQ HQUROOPHQW UDWHV
- WKH GDWD WUHQQ VKRZV QR FKDQJH LQ WKH \$VLDQ HQUROOPHQW UDWHV

)LOLSLQ[

- WKH GDWD WUHQQ VKRZV DQ LQFUHDVH LQ WKH)LOLSLQ[HQUROOPHQW UDWHV
- WKH GDWD WUHQQ VKRZV D GHFUHDVH LQ WKH)LOLSLQ[HQUROOPHQW UDWHV
- WKH GDWD WUHQQ VKRZV QR FKDQJH LQ WKH)LOLSLQ[HQUROOPHQW UDWHV

/DWLQ[

- WKH GDWD WUHQQ VKRZV DQ LQFUHDVH LQ WKH /DWLQ[HQUROOPHQW UDWHV
- WKH GDWD WUHQQ VKRZV D GHFUHDVH LQ WKH /DWLQ[HQUROOPHQW UDWHV
- WKH GDWD WUHQQ VKRZV QR FKDQJH LQ WKH /DWLQ[HQUROOPHQW UDWHV

1DWLYH \$PHULFDQ

- WKH GDWD WUHQQ VKRZV DQ LQFUHDVH LQ WKH 1DWLYH \$PHULFDQ HQUROOPHQW U
- WKH GDWD WUHQQ VKRZV D GHFUHDVH LQ WKH 1DWLYH \$PHULFDQ HQUROOPHQW U
- WKH GDWD WUHQQ VKRZV QR FKDQJH LQ WKH 1DWLYH \$PHULFDQ HQUROOPHQW UD

3DFLILF ,VODQGHU

- WKH GDWD WUHQQ VKRZV DQ LQFUHDVH LQ WKH 3DFLILF ,VODQGHU HQUROOPHQW
- WKH GDWD WUHQQ VKRZV D GHFUHDVH LQ WKH 3DFLILF ,VODQGHU HQUROOPHQW U
- WKH GDWD WUHQQ VKRZV QR FKDQJH LQ WKH 3DFLILF ,VODQGHU HQUROOPHQW UD

:KLWH

- WKH GDWD WUHQQ VKRZV DQ LQFUHDVH LQ WKH :KLWH HQUROOPHQW UDWHV
- WKH GDWD WUHQQ VKRZV D GHFUHDVH LQ WKH :KLWH HQUROOPHQW UDWHV
- WKH GDWD WUHQQ VKRZV QR FKDQJH LQ WKH :KLWH HQUROOPHQW UDWHV

'HFOLQH WR 6WDWH

- WKH GDWD WUHQQ VKRZV DQ LQFUHDVH LQ WKH 'HFOLQH WR 6WDWH HQUROOPHQW
- WKH GDWD WUHQQ VKRZV D GHFUHDVH LQ WKH 'HFOLQH WR 6WDWH HQUROOPHQW
- WKH GDWD WUHQQ VKRZV QR FKDQJH LQ WKH 'HFOLQH WR 6WDWH HQUROOPHQW UI

'RHV \RXU SURJUDP HQUROOPHQW GLVWULEXWLRQ DPRQJ FRPISOLUH WKH &ROOHJH HQUROOPHQW E\ HWKQLF JURXS" &ROOHJH

/DWLQ[1DWLYH \$PHULFDQ 3DFLILF ,VODQGHU WR 6WDWH

- \HV
- QR

,I \HV ORRNLQJ DW WKH HWKQLF JURXS DERYH H[SODLQ FKDQJHV DGGUHVV HDFK HWKQLF JURXS E\ EXOOHW SRLQW

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7KH SURJUDP DFTXLUHV LWV DQQXDO FRKRUW YLD ORWWHU\ ZLWK QR HWKQLFLW\ DSSOLFDQWV IRU WKH 1LWYH \$PHULFDQ HQUROOPHQW GLVWULEXWLRQ E\ HWKQLF JURXS" &ROOHJH

VWXGHQWV

] I hi HÍ. I DDHi i ÍMhí MFD; [Í Z HhFD; [á ; kP sá; [FÍ P P sÍ. k FH[ki

	&\$% !%)	&\$%) !%	&\$% !%+	&\$%+ !%)	&\$% !%)	
	; fUXYg DYfWbh		; fUXYg DYfWbh		; fUXYg DYfWbh	
Gi WWgg						
Bcb`Gi WWgg						
K]R XfYk						
HcHJ						

] I hi HÍ. I DDHi i ÍMhí i P; [á ; kP HÍ Z HhFD; [á* ; DR DÍ i Y; [FHhí6 ORH^a
 ; [FÍ HDY P HÍk] Í. k; KHÍ. k FH[ki

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	; fUXYg DYfWbh		; fUXYg DYfWbh		; fUXYg DYfWbh	
Gi WWgg						
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CÍ. k FH[k] | hi HÍ. | DDHi i ÍCt Í. k FH[k h] | ei

7KLV IRUP LV FRPSOHWHG DQG UHDG\ IRU DFFHSWDQFH

3KDUPDFFAK7QRORJ\)+H3FKDU\$Q7JHOD 6

& DUHHUHDFFQQL7FDO (GXFDWLRQ 3URJUDP\

7DEOH RI &RQWHQWV

\$ 5H \$FFUHGLWDWLRQ ,QIRUPDWLRQ
% \$GYLVRU\ %RDUG
& 5HJLRQDO /DERU 'HPDQG
' 5HJLRQDO /DERU 6XSSO\
(5HJLRQDO :DJHV
) 3URJUDP &RXUVH &RPSOHWLRQ
* 3URJUDP *UDGXDWH (PSOR\PHQW 5DWHV

\$ 5H \$FFUHGLWDWLRQ ,QIRUPDWLRQ

:KHQ ZDV \RXU ODVW UH DFFUHGLWDWLRQ YLVLW"

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)HEUXDU\

'LG WKH SURJUDP PDLQWDLQ DFFUHGLWDWLRQ"

^ \HV

©QR

:HUH WKHUH DQ\ FRPPHQGDWLRQV VSHFLDO PHQWLRQV LGHQWLIL

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2I WKH HYDOXDWLYH DUHDV ~~WKMHVZHG~~ [H]WKH FLXUDMLRQV QRQ FRPSOLDQFH
DUHDV ZLWK DUHDV RI SDUWLDO FRPSOLDQFH WR EH DGGUHVHVG \$FFUHGL'
H[HPSODU\ PRGHO FXUULFXOXP ZKLFK PHHWV DOO JRDOV REMHFWLYHV RI DQ DFF
VWDQGDUGV LQ QXPHURXV DUHDV ([FHOOHQW VWXGHQW VXFFHVV UDWHV ZLWK
+DYLQJ KLJKO\ TXDOLILHG FRPLWWHG IDFXOW\ WHDP DQG GLUHFWRU WHDFKLQJ
3KDUPDFFAK7QLFLDQ &HUWLILFDWLRQ ([DP

:KDW ZHUH WKH PDMRU FLWDWLRQV RI WKH ODVW UH DFFUHGLWD
IDFLOLWLHV SHUVRQQHO HWF "

[ir Hh©

1R PDMRU FLWDWLRQV EXW JDYH ~~VWRUJUVURIFRORPGLDMLWDQ~~ WLRQ VKRXOG ZRUN Z
DGG DSSURSULDWH VXSSRUW RU UHDVVLJQ WLPH VR WKH GLUHFWRU KDV3DGGG
DGYLVRU\ FRPPLWWHH PHPEHUV VKRXOG FUHDWH D JRYHUQQDQFH GRFXPHQW GHIL
WKHLU VSHFLILF WDVN ~~UHVSRQGLH~~ OHDWV VSHFLILF WDVNV WR DGYLVRU\ FRPPL
FRPPLWWHH PHPEHUV LQ WKH ZRUN RI WKH FRPPLWWHH DQG EHQH3LWK ~~BRGWH~~ H
WUDLQLQJ SODQ IRU VWXGHQWV LQFOXGLQJ DOO UHTXLUHG HGXFDWLRQDO JRDOV
FDUULHG WKURXJK HQUROOPHQW DOO SKDVHV RI HYDOXDWLRQ ~~DOQG LQKMLGX~~ WR
WKH HGXFDWLRQDO JRDOV IRU HDFK FRXUVH WDXJKW 3P ~~DSSHGQWW~~ UXKFW ~~RDU~~ ULKFXO
ODERUDWRU\ OHDUQLQJ H[SHULHQFH LQ LQVXUDQ ~~HQ~~ S ~~ULQFWWVX~~ QW RU VS ~~VKR~~ ROGS ~~FR~~
H[SHULHQFHV WR LQFOXGH PRUH SUHV ~~3L~~ ~~SD~~ ~~GR~~ ~~Q~~ ~~S~~ ~~WR~~ ~~FX~~ ~~FW~~ ~~R~~ ~~Q~~ ~~V~~ ~~M~~ ~~K~~ ~~S~~ ~~H~~ ~~Q~~ ~~L~~ ~~G~~ ~~H~~ ~~Q~~ ~~F~~ ~~H~~ ~~N~~ ~~P~~ ~~H~~ ~~D~~
WKH VWXGHQWV RQ WKH XVH RI FXUUHQW WHFKQRORJ\ ~~XD~~ ~~CG~~ ~~L~~ ~~Q~~ ~~V~~ ~~W~~ ~~S~~ ~~D~~ ~~F~~ ~~W~~ ~~R~~ ~~H~~ ~~Q~~ ~~W~~ ~~S~~ ~~R~~ ~~D~~
H[SHULHQFHV UHTXLULQJ VWXGHQWV WR IXQFWLR ~~Q~~ ~~K~~ ~~Q~~ ~~X~~ ~~D~~ ~~Q~~ ~~V~~ ~~H~~ ~~H~~ ~~N~~ ~~R~~ ~~FR~~ ~~U~~ ~~H~~ ~~D~~ ~~L~~ ~~Q~~ ~~H~~ ~~G~~ ~~X~~ ~~H~~ ~~D~~
H[SHULHQWLDO ~~W~~ ~~B~~ ~~D~~ ~~L~~ ~~Q~~ ~~Q~~ ~~W~~ ~~V~~ ~~X~~ ~~F~~ ~~M~~ ~~R~~ ~~U~~ ~~V~~ ~~D~~ ~~Q~~ ~~G~~ ~~D~~ ~~G~~ ~~Y~~ ~~L~~ ~~V~~ ~~R~~ ~~U~~ ~~\~~ ~~F~~ ~~R~~ ~~P~~ ~~P~~ ~~L~~ ~~W~~ ~~W~~ ~~H~~ ~~H~~ ~~P~~ ~~H~~ ~~E~~ ~~H~~ ~~U~~ ~~V~~ ~~V~~ ~~K~~ ~~R~~ ~~X~~ ~~O~~
DOORZ PRUH SUDFWLFH H[SHULHQFH LQ WKH ODERUD ~~W~~ ~~R~~ ~~K~~ ~~R~~ ~~S~~ ~~O~~ ~~G~~ ~~R~~ ~~W~~ ~~H~~ ~~W~~ ~~R~~ ~~L~~ ~~U~~ ~~W~~ ~~D~~ ~~W~~ ~~K~~ ~~D~~ ~~L~~ ~~Q~~ ~~J~~ ~~V~~
3KDUPDFFAK7QLFLDQ &HUWLILFDWH %RDUG H[DP SU ~~3~~ ~~R~~ ~~V~~ ~~K~~ ~~W~~ ~~R~~ ~~O~~ ~~F~~ ~~R~~ ~~S~~ ~~I~~ ~~O~~ ~~H~~ ~~V~~ ~~R~~ ~~Q~~ ~~J~~ ~~D~~ ~~W~~ ~~K~~ ~~H~~ ~~S~~ ~~I~~ ~~R~~ ~~W~~
WKDW VWXGHQWV KDYH FRPSOHWHG DOO UHTXLUHPHQWV SULRU WR JUDGXDWLRQ

:KDW DFWLRQV KDV WKH SURJUDP WDNHQ WR DGGUHVV WKH DFFU
WKH SURJUDP IDFHG LQ LPSOHPHQWLQJ LPSURYHPHQWV"

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,Q RUGHU WR UHFHLYH UH DFFUHGLWDWLRQ WKH SURJUDP ZDV UHTXLUHG WR VXI
HDFK DUHD RI 3DUWLDO &RPSOLDQFH DQG &RQVXOWDWLYH 5HFRPPHQGDWLRQV OL
HYDOXDWLQJ WKH 5HVSRQVH 5HSRUW \$6+3\$&3(JUDQWHG)RRWKLOO &ROOHJH UH

3URJUDPV ZLWK WKH DGGLWLRQ WZR QHZ &7(GXDO HQUROOPHQW SKDUPDF\ FHUM
VHTXHQLQJ WR FUHDWH D PRUH EDODQFHG DQG PDQDJHDEOH IXOO WLPH VWXGH
6SULQJ TXDUWHU

& 5HJLRQDO /DERU 'HPDQG

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