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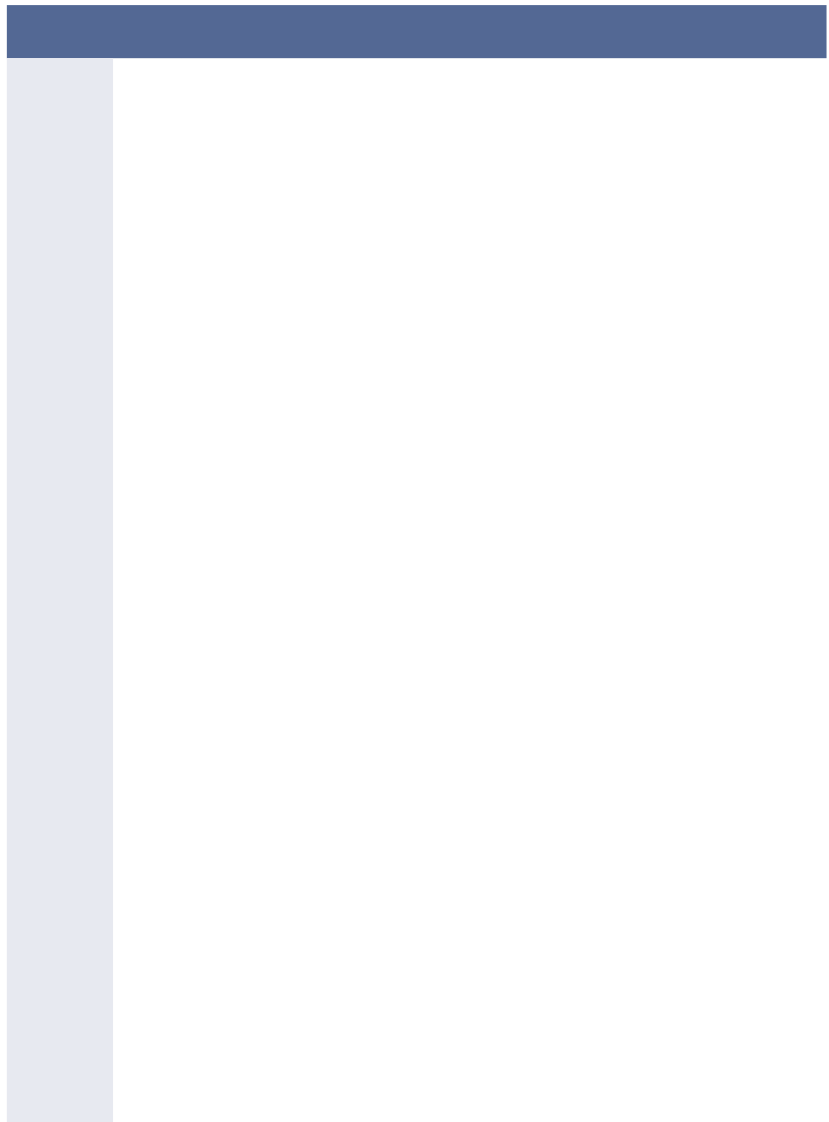
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BOE GMFYJCMZ "T B QJPOFFS JO FOHJOFFSJOH EFTJH
DSFBUJOH WBMVF CZ GPDVTJOH PO QSPDFTT UFDIOPMPHZ
JT SFEEGJOJOH UIF CPVOEBSJFT BOE GVUVSF QSPTQFDUT
UFDIOPMPHZ TFSWJDFT XJUI JUT EJTUJODUJWF ó+5*"/4 .PEFMó

5IF ó+5*"/4 .PEFMó+ JT BO JOOPWBUJWF FOHJOFFSJOH Q
GPS FNQPXFSJOH UIF JOEVTUSJBMJ[BUJPO PG OFX UP

#BTFE PO B QSPDFTT PSJFOUFE FDPTZTU FN BT JUT
JU PQFSBUFT UISPVHI UIF TZOFSHJTUJD DPPQFSE
NPEFM PG ó+5SJ QMBUGPSN *OUFHSBUJPO BOE 5SJQM
JOUFHSBUFT UIF UFDIOPMPHZ QMBUGPSN CVTJO
QSPKFDU DPNNBOE QMBUGPSN 5IJT JOUFHSBUFE
TUPQ TFSWJDFT FODPNQBTTJOH BMM TQFDJBMUJFT B
GVMéàMMJOH UIF WBMVF DPNNJUNFOU PG ó+POF UJNF
GPS DMJFOUT 3FMZJOH PO EJTUJODUJWF TZT
PQUJNJ[BUJPO JOIFSFOU TBGFUZ BOE UFDIOPMPHZ D
DPSF (À€-.PEFM EFMJWFST WBMVF FOHJOFFSJOH TF
POF UJNF TVDDFTTGVM USJBM SVO ESJWJOH UIF TV
JOEVTUSJFT UPXBSET IJHI FOE HSFFO EJJUBM BOE

5*"/4 .PEFM

5IF JOEVTUSJBMJ[BUJPO PG OFX UFDIOPMPHJFT DPOGS
DIBMMFOHFT JODMVEJOH JODPNQMFUF QSPDFTT QBDLBHFT
TDBMJOH VQ TIPSUBHFT PG JOUFSEJTDJQMJOBSZ UBMFOUT
UP DPTU F&FDUJWFOFTT SFMJBCJMJUZ DPNQMJBODF BOE NB

*ODFOUJWF 1SPKFU \$PNNBOEFS 2VBMJGJDBUJPO .B
 5IFTF NFBTVSFT IBWF GBDJMJUBUFE UIF JOUFHSBU
 BDSPTT BMM EJTDJQMJOFT GSPN EFTJHO BOE QSPD
 BOE DPOTUSVDUJPO BDIJFWJOH DPNQSFIFOTJWF QSF
 EFWFMPQNFOU 5IJT FéPSU IBT DVMUJWBUFE B DPSF UFBM
 UFDIOPMPHZ BOE NBOBHFNFOU XJUI FYQFSUJTF JO QS
 JOOPWBUJPO BOE JOEVTUSZBME[BGJPO UIF HSPVQ CPBT
 11 % IPMEFST BOE TDJFOUJTUT JOEVTUSZ DPOTVM
 FYQFSUT BOE UFDIOJDBM CBDLCPOF QFSTPOOFM TQFD
 UFDIOPMPHZ FOHJOFFSJOH EFTJHO BOE QSPEVDUJPO NBO
 O BEEJUJPO UIF 5"/4 4DJFODF 5FDIOPMPHZ
 FTUBCMJTIFE TUSPOH TUSBUFHJD QBSUOFSTIJQT XJUI
 TVDI BT 5TJOHIVB 6OJWFSTJUZ &BTU \$IJOB 6OJWFS
 5FDIOPMPHZ #FJKJOH 6OJWFSTJUZ PG \$IFNJDBM 5FDI
 1SPDFTT &OHJOFFSJOH PG \$IJOFTF "DBEFNZ PG 4DJFODFT
 PG \$IFNJDBM 1IZTJDT #Z UIF FOE PG UIF DPNNJUUFF F
 JOEVTUSZ BDBEFNJB SFTFBSDI FYQFSUT JO EPNBJOT TVD
 TZOUIFUJD CJMPMHZ QIBSNBDFVUJDBMT BOE JOUFMMJHFO

2 'VMM -JGFDZDMF 1SPDFTT 5FDIOPMPHZ
 (VJEFE CZ UIF QSJODJQMF PG 6+NVMUJ DPSF E
 JOUFHSBUF UPQ MFWFM DSPTT EJTDJQMJOBSZ FYQF

5*"/4 .PEFM

1SPDFTT 0SJFOUFE

0QFSBUJPO .PEFM PG ó+5SJ 1MBUGPSN *OUFHSBUJPO BOE 5SJQMF &OHJOF %

5P TZTUFNBUJDBMMZ UBDLMF UIF GSBHNFOUBUJPO CFUXFFO NBSLF
BOE FYFDVUJPO JO DPOTUSVDUJPO QSPKFDUT XIJDI SFTVMUT JO
BOE B QPPS DMJFOU FYQFSJFODF 5*/4 QJPOFFSFE BOE QS
PQFSBUJPOBM NPEFM UIBU JOUFHSBUFT UISFF QMBUGPSNT U
QMBUGPSN UIF CVTJOFTT EJWJTJPO QMBUGPSN BOE UIF QSPK
QMBUGPSN UIBU JT ó+5SJ 1MBUGPSN *OUFHSBUJPO BOE 5SJQMF
NPEFM⁵IJT NPEFM EJTSVQUT USBEJUJPOBM MJOFBS XPSLéáPXT DPO
JOUFSBDUJPO BNPOH UIF UISFF QMBUGPSNT GSPN TFRVFOUJBM D
QBSBMMFM JOUFSBDUJPO *U DPOTUSVDUT BO PSHBOJD FDPTZTUF
DMJFOU WBMVF DBQBCMF PG TFMG PSHBOJ[JOH BOE EZOBNJ
BDIJFWJOH SBQJE SFTQPOTF UP NBSLFU EFNBOET BOE IJHI RVBMJ

1 0SHBOJD &DPTZTUFN 5SJ 1MBUGPSN *OUFHSBUJPO BOE 5SJQMF
5FDIOPMPHZ 1MBUGPSNóL5IF &OHJOF PG *OOPWBUJPO BOE 5FDIO
8F TQFDJBMJ[F JO QSPDFTT UFDIOPMPHZ BOE EFTJHO MFWFSBHJC
UFDIOJRVFT BOE FYDFQUJPOBM DSFBUJWF EFTJHO UP TFU IJHI RV

GPS QSPKFDU EFMJWFSZ 8F QSPWJEF DMJFOUT XJUI
JOUFHSEBUF BEWBODFE JOOPWBUJPO BOE TUSPOH JNQMFN
5*"/4 DPOTUSVDUT B DPSF DPNQFUFUFODZ GPVO
UIF QSPKFDU MJGFDZDMF CZ JOUFHSEBUJOH UFDIOJD
1SPDFTT 5FDIOPMPHZ \$FOUFS UIF (FOFSBM &OHJOF
%FTJHOFS 0éâDF UIF \$IJFG 4BGFUZ 0éâDFS 0éâDF UIF \$IJF
UIF %FTJHO \$FOUFS UIF 2JOHEBP %FTJHO \$FOUFS UI
&OWJSPONFOUBM 5FDIOPMPHZ \$FOUFS UIF #*. \$FOUFS
\$FOUFS UIF 7BMJEBUJPO \$FOUFS UIF #JH %BUB \$FOUF
1MBUGPSN BOE UIF 5FDIOPMPHZ * F UWp

5**/4 .PEFM

JUT GPDVT PO IJHI UFDI JOEVTUSJFT TVDI BT GJOF DIFNJD
DPOUBJOJOH èàOF DIFNJDBMT FMDUSPOJD DIFNJDBMT TZOUIFUJ
CJP QIBSNBDFVUJDBMT 0VS CVTJOFTT DPWFST NPSF UIBO DP
SFHJPOT HMPCBMMZ XJUI NPSF UIBO CFODINBSL QSPKFDUT T
DPNQMFUFE

1SPKFDU \$PNNBOE 1MBUGPSN6L5IF \$PSOFSTUPOF PG 1S
%FMJWFSZ BOE 1FSGPSNBODF

&TUBCMJTIFE BT QIZTJDBM FOUJUJFT JO SFTQPOTF UP TG
SFRVJSFNFOUT UIFTF DPNNOET QSFDJTFMZ BODIPS CPU
EFNBOET BOE EFTJHO TUBOEBSET FOTVSJOH FéàDJFOU IJHI RVBM
XJUI UIF VOXBWFSJOH HPBM PG POF UJNF TVDDFTTGVM USJBM SVC
#Z UIF FOE PG QSPNFRO@

5IF \$MJFOU DFOUSJD 1SPKFU \$PNNBOE 4ZTUFN

5IF 5 * " / 4 QSPKFU DPNNBOE TZTUFN BMMPDB

BDDPSEJOH UP DMJFOU OFFET FOTVSJOH UIBU ó+UIF DPN

QFSTPOOFM JO MJOF XJUI DMJFOU SFRVJSFNFOUTó+ *UT I

1SPGFTTJPOBM \$PNNBOE 5FBEEP°

BDT M ` @ € ` MT @ @ M ` ő FT UT w FBJUFS@ ` OEKq7 ` UMAMFMü „UGQ„q“v%“1

5IF &1\$.BOBHFNFOU 1SPDFTT \$FOUFSFE PO 'PVS \$F
.FFUJOHT

(VJEFE CZ UIF PQFSBUJPO NPEFM PG ó+5SJ 1ME
BOE 5SJQMF &OHJOF %SJWFOó+ 5*" /4 IBT BUFSBUJW
NBOBHFNFOU QSPDFTT BDFOUFSFE PO GPVS BDPPSEJ
QSPDFTT Be€@ZTUFNBUJDBMMZ DPOOFDUT Be€ MM Be€ÀFZ
GVM QSPDFTT DPOUSPM B,,` OE FGGFDUJWF JNQMFNF
EFDJTJPO NBLJOH BOE SFWJFXT VMUJNBUFMZ BU
EFMJWFSZ

5*"/4 .PEFM

'PVS \$PPSEJOBUPPO .FFUJOHT

'PVS .FFUJOHT	,FZ \$POUFOUT	1BSUJDJB

%JTUJODUJWF 4ZTUFNT

*O UIF JOEVTUSJBMJ[BUJPO PG OFX UFDIOPMPHJFT
FOUFS UIF NBSLFU BU B DPNQFUJUUJWF QSJDF TFSW
GPS FWBMVBUJOH JUT FDPOPNJD WJBCJMJUZ *OWFT
GSPN B DPNQSFIFOTJWF VOEFSTUBOEJOH PG QSPE
TZTUFNBUJD NBOBHFNFOU UISPVHIPVU UIF FOUJS
5IFSFGPSF XF IBWF FOHJOFFSFE B QSPGPVOE USBOTGP
JOWFTUNFOU DPNQFUJUUJWFOFTT BJNJOH UP BDIJFWF U
PG+DPOUSPMMJOH JOWFTUNFOU DPTU CFUUFS UIBO D
QSPKFDU JOWFTUNFOU NPSF F&#x26;FDUJWFMZ UIBO USBEJU

1 4PVSDF *OOPWBUJPO 0QUJNJ[JOH UIF -JGFDZDM
1SPDFTT *OUFMMJHFODF
*OWFTUNFOU DPTU DPOUSPM NVTU DPNNFODF CFGPSF EF
QSPDFTT JOUFMMJHFODF 5*"/4 IBT BTTFNCMFE BO FYQFS
FYQFSUJTF JO QSPEVDUJPO PQFSBUJPOT "EIFSJOH UP

5*"/4 .PEFM

PG ó+EFTJHO HVJEFE CZ QSPEVDUJPOó+ XF DPOEVDU B SFWFSTF
EFQUI EFTJHO PQUJNJ[BUJPO TUBSUJOH GSPN UIF CFOFéàU PSJHJ
'BDUPSZ

.FBOXIJMF GVMM MJGFDZDMF JOWFTUNFOU DPOUSPM JT
%VSJOH UIF GFBTJJCJMJUZ TUVEZ QIBTF NVMUJ TDIFNF UFDIOJDBM
DPNQBSJTPOT BSF DBSSJFE PVU UP MPDL JO UIF PQUJNB M JO
*O UIF EFTJHO QIBTF XF FNCFE DPTU EJTDJQMJOE BU UIF TPV
JOUFOTJWF QMBOU MBZPVU QSPDFTT PQUJNJ[BUJPO JOUFMMJH
QSFDJTJPO FRVJQNFOU TFMFDUJPO

-BZPVU 0QUJN5J[~~SRUWH~~PIOTZTUFNBUID QMBOU XJEF PS
XPSLTIPQ MFWFM MBZPVU PQUJNJ[BUJPO XF SFEVDF NBUF
EJTUBODFT CZ BO BWFSBHF PG UP TJHOJéàDBOUMZ SFEV
MPHJTUJDT JOWFTUNFOU DPTU

&éiB"JD@•đD İOUM @OF W_ [@0 €PNUà @ !Q GM...\$pP _

TFMFDUJPOT GSPN PWFS B UIPVTBOE QSPKFDUT XF QSFD
BOE FRVJQNFOU UP QSPKFDU DBQBDJUZ BOE UFDIOJDBM
PQUJNB M FDPOPNJD BOE QFSGPSNBODF àU GPS NBYJNVN

2

#Z JNQMFNFOUJ OH UIF 6+EFNBOE JOUFHSBUFE QSPDVSNFOU6
TZTUFNBUJDBMMZ QMBO QSPKFDU TPVSDJOH %FMJWFSZ TDI
FRVJQNFOU BOE NBUFSJBMT BSF EZOBNJDBMMZ MJOLFE U
QSPHSFTT NJOJNJ[JOH PO TJUF NBUFSJBM TIPSUBHFT BOE XBS
\$POTUSVDUJPO 'FFECBDL &OBCMJOH -FBO \$MPTFE MPPQ .BO
5ISPVHI UIF FYUFOTJWF BQQMJDBUJPO PG #VJMEJOH *OGPSNBU
#*. BOE NPEVMBS QSGBCSJDBUJPO SFXPSL JT SFEVDFE BU UIF
6+SFBM UJNF EFTJHO DPOTUSVDUJPO GFFECBDL NFDIBOJTN6+ P
CBSSJFST CFUXFFO EFTJHO BOE DPOTUSVDUJPO FTUBCMJTIJOH

TUBHF EFTJHO SFEVDFT FRVJQNFOU JOWFTUNFOUT CZ NP
1 t 5IF BQQMJDBUJPO PG #*. BOE NPEVMBS UFDIOP
QSPKFDU TDIFEVMFT CZ Ê BOE SFEVDFT MBCPS DPTU

3%JHJUBM &OHJOF %BUB ESJWFO 1SFDJTJPO *OV
#FZPOE SFMZJOH PO FYQFSJFODF TDJFOUJGJD BQQ
JNQPSUBODF 5*"/4 IBT EFWFMPQFE B DPOUJOVPVT

over 50%, weighing accuracy remains consistently high, and batching labor is reduced by 80%.

1 1 *OUFHSBUFE PG 4FQBSBUJPO BOE 8BTIJOH .PEVMFT JO -J
1 SPDF#Z JOUFHSBUJOH TPMJE MJRVJE TFQBSBUJPO XBTIJOH BO
FYUSBDUJPO BOE QIBTF TFQBSBUJPO BOE MPX UFNQFSBUVSF W

BOOVBM FDPOPNJD CFOFGJUT DBO GVMMZ DPWFS BM
QSPKFDUT FWFO ZJFMEJOH B QSPéàU

'PS IJHI TBMU BOE IJHI DPODFOUSBUJPO DIFNJDBM BC
XBTUFXBUFS UIF BQQMJDBUJPO PG BEWBODFE P
JOUFHSBUJPO DPODFOUSBUJPO BOE DSZTUBMMJ[BUJPO
UIF NPUIFS MJRVPS BNPVOU UP MFTT UIBO BDIJFWF B
PWFS BOE MPXFS UIF PWFSBMM TZTUFN PQFSBUJO

*OUFHSBUFE 0QUJNJ[BUJPO BOE -JGFDZDMF 1S
&MJNJOBUF)JEEFO \$PTUT

*O B IJHI FOE "DUJWF 1IBSNBDFVUJDBM *OHSFEJ
QSPEVDUJPO DBQB DJUZ JT JODSFBTFE CZ UISPV
PQUJNJ[BUJPO XIJMF UIF PWFSBMM JOWFTUNFOU JT SFE
UP UIF CVEHFU

*O B LFZ GJOF DIFNJDBMT QSPKFDU UIF GVMM QS
SFEVDFE DMJFOUó,T PQFSBUJOH DPTUT CZ BOE TIPS
QBZCBDL QFSJPE CZ

5**/4 .PEFM

4BGFUZ JT OPU NFSFMZ BCPVU DPTU CVU JU TFSWFT BT UI
JOWFTUNFOU BOE DPNQFUJWFOFTT JO OFX UFDIOPMPHZ JOEV
5**/4 IBT SFEFéàOFE USBEJUJPOBM QBTTJWF TBGFUZ CZ SFHBS
DPSF FOHJOFFSJOH BUUSJCVUF UIBU DBO CF EFTJHOFE BOE J
8F IBWF FTUBCMJTIFE B DPNQSFIFOTJWF JOIFSFOU TBGFUZ NB
TZTU FN DFOUFSFE PO ó+SJTL QSF DPOUSPM TPVSDF HPW
GVMM MJGFDZDMF (NBLJ OH NFDIBOJTN UIBU JOUFHSBUFT ó+EBUB
FYQFSUJTF
CJEJSF DUJPOBM WFSJéàPDBUJPO BOE FOIBODFNFOU 1SFWFOUJPO
EFFQMZ FNCFEFE BU UIF TPVSDFT PG QSPDFTT BOE EFTJHO B
JNQMFNFOUFE BDSPTT UIF GVMM MJGFDZDMF 3 % EFTJHO
DPOTUSVDUJPO USJBM QSPEVDUJPO BOE PQFSBUJPOT 5ISPVH
DPNQMJ BODF ESJWFO EFMJWFSZ XF FOTVSF FWFSZ MJOL
USBDFBCMF BOE DPOUSPMBCMF

*U JT éàSNMZ CFMJFWFE UIBU UIF IJHIFTU MFWFM PG TBGFUZ MJ
UIF QPTTJCJMJUZ PG SJTL PDDVSSFODF 5IFSGPSF UIJT TZTU FN C
DPNQMJ BODF CVU BMTF FTUBCMJTIFT SFMJBCMF BOE TVTUBJO
FOHJOFFSJOH WBMVF GPS DMJFOUT TZTU FNBUJDBMMZ DPOWFSUJ
UFSN QSPKFDU BEWBOUBHFT

1 4BGFUZ JT B %FTJHO BCMF BOE %FMJWFSBCMF
5*" /4 WJFXT TBGFUZ BT BO FOHJOFFSJOH BUUS
JOUFHSBUFE GSPN UIF TPVSDF BEIFSJOH UP UIF GPMMPX
i t 1SPBDUJWF 1\$JODJQMF BHFNFUO CFHJOT BU UIF C
EFTJHO TUBHF
i@tt *OUFHSBUJPO #S.GFDJQMFSWFT BT UIF DPNNPO H
QSJODJQMF GPS BMM EJTDJQMJOFT FODPNQBTTJOH QSPD
DPOTUSVDUJPOISG@F5ÁMà\FUJF

*OIFSFOU 4BGFUZ %FTJDE(JGZFWBΘFTUIBO POF UI

BOE DPNQMJBODF DFSUJéàDBUJPOT

\$POTUSVDUJPO01TBTUF EZOBNJD TVQFSWJTJPO XJUI TQFDJBMJ

DPOUSPM QMBOT EFWFMPQFE GPS IJHI SJTL BDUJWJUJFT

*OJUJBUJPO 1IBTF \$P DSFBUJOH UIF 3VMFT
\$PMMBCPSBUF XJUI DMJFOU UP FTUBCMJTI B
KPJOUJZ JEFUJGZ DSJUJDBM DPOGJEFUJBMJUZ QPJ
DVTUPN15PKFDU \$POéàEFOUJBMJUZ 8IJUF 1BQFS

&YFDVUJPO 1IBTF %ZOBNUJ \$POUSPM
1FSTPOOFM *TRIMBUJFOU DFMM MFWFM BDDFTT DPOU
UIF ó+NJOJNVN OFDFTTBSZó+ QSJODJQMF \$PSF JOGPSNBU
FRVJQNFOU BOE DPOUSPM TZTUFNT JT EFDPNQPTFE
FOHJOFFST UP BDDFTT POMZ UIF FTTFOUJBM JOGPSN
NPEVMFT

1SPDFTT *TRIMBUJFOU SFWJFXT BSF DPOEVDUFE JO D
SPPNT "MM ESBGUT BSF TISFEEFE JNNFEJBUFMZ PO TJUF %
QMBDF PWFS QIZTJDBMMZ JTPMBUFE OFUXPSLT BOE BOZ VO
FYQPSU JT QSPIJCJUFE

#FIBWJPSBM "\$POGJEFUJBM BSFBT PQFSBUF VO
BDDFTT ó+XIUFMJTUó+ &OUSZ BOE FYJU SFDPSET BT XFM
BSF BSDIJWFE BVUPNBUJDBMMZ GPSNJOH BO JNNVUBCMF

*O B OFX CBUUFSZ NBUFSJBM JOEVTUSJBMJ[BUJPO
XBT EJWJEFE JOUP NVMUJQMF NPEVMFT &OHJOFFSJOH
EJTDJQMJOFT DPVME POMZ BDDFTT EBUB EJSFDUMZ S
EFTJHO DPMBCPSBUJPO JT DPOEVDUFE UISPVHI QIZTJD
FODSZQUFE TBOECPY FOWJSPONFOUT 5IJT NFBTVSF F
VOBVUIPSJ[FE JOGPSNBUJPO BHHSFHBUJPO

\$MPTJOH 1IBTF ;FSP "VEJU

6QPO QSPKFDU DPNQMFUJPO B SJHPSPVT 6+EBUB TBOJUJ[B
JT JNQMFNFOUFE "MM DMBTTJGJFE FMFDUSPOJD EBUB VOEFS
WFSJGJDBUJPO CFGPSF JSSFWFSTJCMF QIZTJDBM FSBTVSF
BSF QVMQFE BOE EFTUSPZFE VOEFS EVBM TVQFSWJTJPO "
\$POGJEFOUJBMJUJZ J"VETJCNBQBSB UP UIF DMJFOU BT UIF GJ
EFMJWFSBCMF BDIJFWJOH B TUSFBNMJOFE DMPTFE MPPQ TFDVSJU

3*OOPWBUJPO 1SBDUJDFT #FZPOE UIF 4UBOEBSE
5IF 5*"/4 UFDIOPMPHZ DPOéàEFOUJBMJUJZ TZTUFN JT NPSF SPCV
TFWFSBM GPSXBSE MPPLJOH QSBDUJDFT

'PS FYDFQUJPOBMMZ TFOTJUJWF QSPKFDUT BU DMJFOU S
QSPKFDU FOWJSPONFOUT XJUI TJNVMBUFE UFDIOJDBM QB
CFFO FTUBCMJTIFE UP NPOJUPS BOE BMFSU BHBJOTU BOZ TVTC
BDUJWJUJFT 5IJT BQQSPBDI IBT TVDDFTTGVMZ BTTJTUFE DMJ
BOE NJUJHBUJOH QPUFOUJBM CVTJOFTT SJTLT

#MPDLDIBJO CBTFE FWJEFODF BODIPSJOH "MM BDDFTT BOE
MPHT PG DPSF EPDVNFOUT BSF TZODISPOJ[FE JO SFBM UJNF UP U
FWJEFODF TUPSBHF QMBUGPSN HFOFSBUJOH KVEJDJBMZ SFDP
FWJEFODF UP PèßFS JSSFGVUBCMF QSPPG GPS QPUFOUJBM EJTQVU

\$POGJEFOUJBMJUJZ JT OPU TPMFMZ BCPVU TJHOJOH BH
B DVMUVSBM JNQFSBUJWF 5ISPVHI SFHVMBS TDFOBSJP C

5FDIOPMPHZ \$POéàEFOUJBMJUZ .

DBTF TUVEJFT FNQMPZFF DPOGJEFOUJBMJUZ DSFEJU
NFDIBOJTNT DPOGJEFOUJBMJUZ BXBSFOFTT JT EFFQM
DVMUVSF

#Z UIF FOE PG PWFS QSPKFDUT JOWPMW
BOE DVUUJOH FEHF UFDIOPMPHJFT IBE CFFO TVDD
DPOéàEFOUJBMJUZ SPPNT NBJOUBJOJOH BO JNQFDDBCMR
BOE BDIJFWJOH DMJFOU TBUJTGBDUJPO GPS DPOTFDV

* OOPWBUJWF 1SBDUJDFT

\$PNQSFIFOTJWF %JTDJQMJOFT BOE -JGFDZD

5IF DPOTUSVDUJPO QSPKFDUT JO éàFMET PG éàOF DIFNJDBMT CJPQI
BOE FMFDUSPOJD DIFNJDBMT BSF GBDJOH NVMUJQMF DIBMM
IJHI UFDIOJDBM JOUFHSBUJPO UJHIU TDIFEVMFT BOE DPNQMFY
DPPSEJOBUIJPO 5SBEJUJPOBM EFTJHO JOTUJUUVUFT PS DPOTUSVDU
MPOHFS GVMZ NFFU DMJFOUTó, DPNQSFIFOTJWF SFRVJSFNFOU C
GPSFTJHIU IPMJTUJD FOHJOFFSJOH TPMVUJPOT BOE HVBSBOUFFE
BEESFTTFT UIFTF SFRVJSFNFOU UISPVHI JUT BQQSPBDI PG ó+DF
EJTDJQMJOFT BOE MJGFDZDMF TFSWJDFó+ GBDJMJUBUJOH UIF
JOUFHSBUJPO PG BMM OFDFTTBSZ UFDIOJDBM BOE PQFSBUJPOBM
FTUBCMJTIFT B TFBNMFTT SFMJBCMF BOE FGGJDJFOU EFMJW
UFDIOPMPHZ UP JOEVTUSJBM BQQMJDBUJPO GPS DMJFOUT

1 \$PNQSFIFOTJWF %JTDJQMJOFT)PSJ[POUBM *OUFHSBUJ
&MJNJOBUEF 5FDIOJDBM 4JMPT

5**/4 IBT EFWFMPQFE B DPNQSFIFOTJWF QSPGFTTJPOBM GSBM
FODPNQBTTFT UIF FOUJSF JOEVTUSJBMJ[BUJPO DIBJO PG FNFHJO

5IJT TZTUFN OPU POMZ SFTPMWFT UIF JTTVF PG 6+ XI
BMTP UISPVHI JO EFQUI IPSJ[POUBM JOUFHSBUJPO DPN
QSPGFTTJPOBM CBSSJFST HVBSBOUFFJOH UIBU UFDIOJD
QSFDJTFMZ BOE QSPNQUMZ JNQMFNFOUFE BDSPTT BMM E
8F PGGFS GVMM DPWFSBHF PG BMM EJTDJQMJOFT F
3 % FOHJOFFSJOH DPOTVMUBODZ BOE EFTJHO QSPDFT
FDPOPNJD FTUJNBUJPO DMFBOSPPN TZTUFNT BVUPNBUJ
QSPUFDUJPO DPNNJTTJPOJOH WBMJEBUJPO FRVJQN
BOE FWFO #*. BOE EJHJUBM EJTDJQMJOFT OF JT TUBGGF
UPQ MFWFM FYQFSUT BOE FRVJQQFE XJUI SPCVTU DBO
JOUFHSBUFE JOUFSOBM DPMMBCPSBUJPO NFDIBOJTN XF
EJTDJQMJOBSZ TZOFSHZ DPOWFSUJOH GSBHNFOUFE
JOUFHSBUFE QSPKFDU TVQQPSU TZTUFN
"MM QSPGFTTJPOBM UFBNT BSF PSHBOJDBMMZ

5*"/4 .PEFM

PGGFSJOH ó+FOE UP FOEó+ TFSWJDFT GSPN UIF DPODFQUVB
PQFSBUJPOBM QIBTF SBUIFS UIBO NFSFMZ QBSUJDJQBUJOH JO QF
5IJT HVBSBOUFFT UIBU DMJFOUT VMUJNBUFMZ PCUBJO B GVMMZ JO
DBQBCMF PG TVTUBJOFE WBMVF DSFBUIPO SBUIFS UIBO KVTU B T
BOE GSBHNFOUFE QSPKFDUT

5IF QSPKFDU DPNNFODFT XJUI GSPOU FOE QSPDFT
EFWFMPQNFOU QSPDFTT PQUJNJ[BUJPO QJMPU TDBMF UFTU

3 \$PSF 7BMVF 5IF 4ZOFSHJTUJD "EWBOUBHF PG
 5IF DPNCJOBUIJPO PG 6+DPNQSIFOTJWF EJTDJQMJOFT6+
 QSPWJEFT B EFDJTJWF BEWBOUBHF

5SBEJUJPOBM 4VCDPOU	SBDUJO 5*"/4 EPEFM
.VMUJQMF *OUFSGBDFT %Jéa \$PPSEJOBUIJPO \$MJFOU NBOBHFT NBOZ TV JOUFGSBDFT MFBEJOH UP IJH DPNNVOJDBUIJPO DPTUT BOE SFTQPOTJCMJUJFT	Jéa D Y MU 4 JOHMF 3FTQPOTJCMF & OUJUZ 5*"/4 BDUT BT UIF TPFM JOUFGSBDFT QOMJFS BT TVNFT GVMM SFTQPOTJCMJUJZ FOBCMJOH TJNQMF BOE Féa VODMFBS NBOBHFNFOU
5FDIOPMPHZ &BTJMZ %JTD 3 % EFTJHO DPOTUSVDUJ PQFSBUJPO IBWF JODPOTJ PCKFDUJWFT EJMUVJOH UF	5FDIOPMPHZ 'VMMZ *OUFHSBUFE 5F B O E JDBM UFBN QBSUJDDJBUFT U F I S U V H I P V U F O T V S J O H Q S F D J T F U S B O E M B L O U P O G S P N M B C U P G B C
-PDBM 0QUJNJ[BUJPO 0WFS \$POUSPM 1BSUJFT QVSTVF NJOJNVN UIFJS PXO TFHNFOUT&3FBT UP PWFSBMM CVEHFU BOE PWFSSVOT	SBMM -PTT PG (MPCBM 0QUJNJ[BUJPO D F D J T U P O N B L J O H C B T F E P O U P U B M M Z J Q F B E D O H F D P T U N B Y J N J J O H J O W F T U T D V B E W M F
3JTL 5SBOTGFS 1SPCMFNT MFBE UP NVUVBM UIF DMJFOU BT UIF VMUJNB	3JTL *OUFSOBMJ[BUJPO 5*"/4 SFTPMWFT BMM JOUFS EJTDJQMJ C M B N E X J J U I J T I V E T J O U E S O B M M Z E F M J W F S J O H D F U P U I F D M J F O U

5*"/4 .PEFM

1JMPU 1MBUGPSN

'SPN MBCPSBUPSZ éáBTLT UP GBDJMJUZ QSPEVDUJPO MJOFT VQ UP
BDIJFWNFOUT GBJM UP CF TDBMFE VQ EVF UP DIBMMFOHFT
TDBMJOH BOE DPTU PWFSSVOT 5IF 5*"/4 1JMPU 1MBUGPSN OPU PO
UP FOE WBMJEBUJPO TFSWJDFT GSPN NJDSP TDBMF CVU BMTP U
MBCPSBUPSZ TBNQMFT JOUP JOEVTUSJBM HSBF QSPEVDUT XJUI TDB
DBQBCJMJUJFT 5IJT QMBUGPSN TZTUFNBUJDBMMZ CSJEHFT UIF ó+MBT
UFDIOPMPHJDBM GFBTJCJMJUZ BOE DPNNFSDJBM TVDDFTT

1 1MBUGPSN \$BQBCJMJUJFT BOE %BUB 'PVOEUBUJPO
)BSEXBSF *OGSBUJDBMMZ QQFE XJUI NPSF UIBO UZQFT PG
TQFDJBMJ[FE QJMPU TDBMF QSPEVDUJPO MJOFT JODMVEJOH DPO
UFNQFSBUVSF IJHI QSFTTVSF TZTUFNT EJTUJMMBUJPO QVSJGJDE

*O BEEJUJPO UP QSPWJEJOH WBMJEB
B ó+QJMPU EBUB QBDLBHFó+ EJSFDUMZ BQQMJDBC MF UP
ó+NPEVMBS QSPDFTT QBDLBHFó+ XJUI IJHI SFQMJD BCJMJU

5*"/4 .PEFM

\$PTU 1SFDJTJPO "DDPVOUJOH BOE 0QUJNJ[BUJPO -FWFSB
TDBMF EBUB BO BDDVSBUF ó+NBUFSJBM CBMBODF BOE FOFS
NPEFM6+ JT FTUBCMJTIFE GBDJMJUBUJOH QSPEVDUJPO DPTU DB
FSSPS SBUF JO GJOBM NBTT QSPEVDUJPO DPOUSPMMFE XJUIJO
SPCVTU EBUB TVQQPSU GPS JOWFTUNFOU EFDJTJ POT BOE QSPEVD
3FMJBCJMJUZ BOE 5JSPV5HTTUNOMBUJJOH FYUSFNF DPOEJUJ POT
BOE DPOEVDUJOH MPOH UFSN PQFSBUJ POT DPOUJOVPVT TUBO
BDDFMFSBUFE BHJOH UFTUT XJUI B EVSBUJPO PG óI IPVST BSF D
FOTVSF UIBU UIF QSPEVDU QFSGPSNBODF BOE UIF TFSWJDF MJGF F
DSJUJDBM DPNQPOFOUT NFFU DPNNFSDJBM SFRVJSFNFOUT .FBC
QSPEVDUJPO GBJMVSF SBUFT BSF SFEVDFE CZ NPSF UIBO
4BGFUZ BOE &OWJSPONFOUBM \$PNQMJBODF 1SF SFWJFX \$
SFBUDUJPO TBGFUZ SJTL BTTFTTNFOUT JOJUJBM QSPDFTT WBMJE
XBTUF USFBUNFOU QSPDFTT WBMJEBUJPO BSF DPOEVDUFE UP
QSPDFTT SPVUF JT JOIFSFOUMZ TBGF BOE FOWJSPONFOUBMMZ DP
SFNPWJOH NBKPS PCTUBDMFT UP QSPKFDU BQQSPWBM BOE QSPEV
5BMFOU 5SBJOJOH BOE %PDVNFOSUBUJPOF0WBQVBUJPO
QSPDFTT NPSF UIBO DPSF QSPDFTT FOHJOFFST BOE PQFSBU
GPS DMJFOUT BOE TUBOEBSEJ[FE QSPDFTT QBDLBHFT 1%1
PQFSBUJPOBM QBSBNFUFST BOE 4UBOEBSE 0QFSBUJOH 1SPD
EFMJWFSFE SFBMJ[JOH UIF EVBM JNQMFNFOUTUBUJPO PG ó+UFDIOJ
ó+UBMFOU USBOTGFSó+

3*OEVTUSZ "DBEFNJB 3FTFBSDI "QQMJDBUJPO \$PMMBC
5IF 5*"/4 1JMPU 1MBUGPSN IBT QJPOFFSFE B EJTUS
BMMJBODF PG QJMPU CBTFT 5ISPVHI FRVJQNFOU

5*/4 .PEFM

.PEVMBS 1SPDFTT 6OJUT

*O USBEJUJPOBM FOHJOFFSJOH NPEFMT GBDJMJUJ DPOTUSVDUJPO J
TDVMQUJOH GSPN TDSBUD6+ B QSPDFTT NBSLFE CZ MPOH UJNFMJC
RVBMJUJ BOE DPTU PWFSSVOT 5*/4 SFWPMVUJPOJ[FT DPOTUSVDUJ

#Z UIF FOE PG XF IBE TVDDFTTGVMZ EFMJWFS
TUBOEBS QPSUBCMF VOJUT BDSPTT FJHIU DPSF QSPDFT
.73 FWBQPSBUJPO DSZTUBMMJ[BUJPO FMFDUSP
DPOUJOVPVT GMPX IZESPHFOBUJPO BOE IB[BSEPVT C
"MM QSPKFDUT BDIJFWFE B POF UJNF BDDFQUBOD
EFMJWFSBCMFT IBWF DSFBUE UBOHJCMF WBMT # @ ± "KFD
p†

0 B@@@

5 * " / 4 . P E F M

2 5 * " / 4 * O U F M M J H F O U * O T U B O U B O F P V 4 Z \$ B O W J O V P V T 4 U F S J M
% F æ (O J O H B O * O E V T U S Z U I S P V H I B % J T U J O D U \$ B U F H P S Z

DBQJUBMJ[F PO NBSLFU PQQPSUVOJUJFT

1 4FBNMFTT 5FDIOPMPHJDBIM06QSSDEFT JOOPWBUJP
PDDVS TQFDJGJD NPEVMFT DBO CF JOEFQFOEFOUMZ
XJUIPVU TDSBQQJOH FOUJSF QSPEVDUJPO MJO
JOWFTUNFOUT

1 (SFFO BOE 4VTU5B8ONPCEMFMBS EFTJHO FOBCMF
EJTBTTFNCMZ BOE SFMPDBUJPO UIFSFCZ NBYJNJ[JOH UI
FOUJSF MJGFDZDMF

5*/4 .PEFM

#* . *NQMFNF OUBUJPO

5ISPVHI FYUFOTJWF BQQMJDBUJPO JO PWFS DPNQMFY QSPKFD
QSPHSFTTFE CFZPOE CBTJD NPEFMJOH UP FTUBCMJTI B DPNQSFIF
DPM MBCPSBUJPO FDPTZTUFN *U IBT BDIJFWFE B USJQMF MF
SFBMJ[BUJPO M@ SUMMWJOCÆP Ñ.P

T,€3

D

#*.*NQMFNFOUBUJPO

GBDJMJUZ BOE JT SJDI JO DSJUJDBM FOHJOFFSJOH EBUB
i t 0QFSBUJPOBM &6DUJF0BZ FE TJNVMBUJPO BOE EJBH
JNQSPWF JOTQFDUJPO BOE GBVMU SFTPMVUJPO SBUFT CZ
i t \$PTU 4BWJSCHT FOUJWF NBJOUFOBODF BOE FOFSH
PQUJNJ[BUJPO DBO SFEVDF MJGF DZDMF PQFSBUJOH DPT

5*"/4 .PEFM

%JHJUBM %FMJWFSZ

5P EFMJWFS USBDFBCMF TJNVMBUBCMF BOE PQFSBCMF EJ
UP DMJFOUT UPHFUIFS XJUI QIZTJDBM GBDJMJUZ 5*"/4 IBT I
JOUFHSBUFE EBUB DIBJO DPWFSJOH EFTJHO QSPDVSNFOU DPC
PQFSBUJPO 6UJMJ[JOH IJHI QSFDJTJPO % NPEFMT BT WJTVB
TUSVDUVSFE EBUB BT UIF DPSF JU FTUBCMJTIFT B TUBUJD NBC
PDW @@QQFđ éàIW VPSF D@VBQJMEUJF

2) JHI 1SFDJTJPO .PEFMJOH BOE %BUB -JOL
5*" /4 %JHJUBM FOHJOFFST BSF QSPGJDJFOU JO V
JOUFSOBUJPOBM QMBUGPSNT TVDI BT 41 % GF
DPMBCPSBUJWF EFTJHO BDSPTT BMM EJTDJQMJO
TQFDJBMUJFT DPOEVDU SFBM UJNF TZODISPOPVT XPSL
TQBD F XJUI EBUB TZODISPOJ[FE JO SFBM UJNF 5IF
EFUFDUJPO GFBUVSF FTUBCMJTIFT B SBQJE 6+EFTJHO
NFDIBOJTN 1SPWFO JO QSBDUJDF UIJT BQQSPBDI SFI
DIBOHFT BOE SFXPSL CZ BO BWFSBHF PG BQQSPYJNBUR
SFEVDJOH QSPKFDU DPTUT BOE UJNF

3) JHI 1FSGPSNBODF 5FBN)JHI &æ*DJFODZ 0SHBC
'PS FBDI EJHJUBM EFMJWFSZ QSPKFDU B EFEJDBUF
FTUBCMJTIFE XIJDI JT MFE CZ B %JHJUBM %FMJWFSZ .
QSPGFTTJPOBM LOPXMFEHF GSPN UIF EFTJHO QSP
*5 TFDUPST 5IF FOUJSF QSPDFTT GSPN QSPKFDU J
GPSNVMBUJPO UP BDDFQUBODF BOE EFMJWFSZ JT TUSFE
QMBUGPSN "T B SFTVMU UIF PO UJNF QSPKFDU EFMJWF
UIF DPTU XBTUF DBVTFE CZ JOGPSNBUJPO FSSPST BOE
SFEVDFE CZ UP

4 'VMM \$ZDMF 2VBMJUZ \$POUSPM %FMJWFSJOH 5SVTUXPSUIZ
 5**/4 %JHJUBM %FMJWFSZ 5FBN DPOTJTUFUOMZ BEIFSFT UP EB
 DPOTJTUFODZ DPNQMFUFOTT BOE DPNQMUBODH BT DPSF QSJODJ
 TUSJDU NPEFM UFTUJOH BOE EBUB WFSJGJDBUJPO QSPDFTTFT J
 EJHJUBM NPEFMT BSF QSFDJTFMZ BMJHOFE XJUI EFTJHO ESBXJ
 GBDJMJUJFT FRVJQNFOU MJTUT FUD 5IJT BQQSPBDI MFBET UP UIF E
 RVBMJUZ EJHJUBM UXJOT UIBU BDDVSBUFMZ NJSSPS SFBM XPSME GE
 1SBDUJDF EFNPOUSBUFT UIBU TUSJDU RVBMJUZ DPOUSPM SFEVD
 DPOÉJDUT JO EFTJHO DPMBCPSBUJPO CZ PWFS OPUBCMZ FOIB
 NBLJOH FGGJDFODZ .FBOXIJMF JU TBWFT NPSF UIBO P
 QSFQBSBUJPO UJNF BOE DPTUT GPS BEWBODFE BQQMJDBUJ
 NBJOUFOBODF BOE JOUFMMJHFOU JOTQFDUJPO BGUFS GBDJMJUZ DPN

5 &NQPXFS 'VUVSF 4NBSU 0QFSBUJPOT %FMJWFSZ JT +VTU UIF
 5IF VMUJNBUF WBMVF PG EJHJUBM USBOTGPSNBUJPO MJFT
 PQFSBUJPOT 5**/4 JT BDUJWFMZ QSPNPUJOH BOE XJMM DPOUJ
 UIJT JOJUJBUJWF

&OIBODF %BUB "TTFU .BOBHFNFGBTFEPOJMJ[BUJPO
 UIF FYJTUJOH NBUFSJBM EBUBCBTF FTUBCMJTI FOUFSQSJTF
 &RVJQNFOU %BUBCBTFT6+ BOE 6+5ZQJDBM %FTJHO .PEVMF -JCSB
 UIF JOUFHSBUJPO PG EJHJUBMMZ EFMJWFSFE TUBUJD EBUB XJUI S

EBUB F H %\$4 EBUB EVSJOH GBDJMJUZ NBJOUFOB
GPVOEUBJPO GPS BEWBODFE BQQMJDBUJPO TVDI BT C
BOE JOUFMMJHFOU JOTQFDUJPO

&TUBCMJTI B 6OJGJFE %5FMJWFSZD1UMBMFGPTSNU
JOUFHSEBUF JOUFMMJHFOU TPGUXBSF XJUI NVMUJ TPV
NBOBHFNFOU BOE QSPHSFTT USBDLJOH DSFBUJOH
VOJGJFE EJHJUBM EFMJWFSZ QMBUGPSN *U OPU PO
NPEFM CSPXTJOH CVU BMTF TVQQPSUT SBQJE EBUB SFUS
SFHJPO MJOLFE EPDVNFOU BDDFTT DPOTUSVDUJPO TJ
GVODUJPO VMUJNBUFMZ EFMJWFSJOH B 6+TDBMBCM
GBDJMJUZ DPSF

#Z UIF FOE PG EJHJUBM USBOTGPSNBUJ
TVDDFTTGVMZ EFMJWFSFE GPS MFBEJOH EPNFTUJD G
JODMVEJOH +VIVB (SPVQ BOE 5JBOKJO #PIBJ DIFNJDBM JO

5*"/4 .PEFM

"VUPNBUJPO BOE *OGPSNBUJ[BUJPO

*O JOEVTUSJFT XJUI DPNQMFY DPOUSPM MPHJD BOE IJHI SFHVMBU
BT èàOF DIFNJDBMT TZOUIFUJD CJPMPHZ BOE CJPQIBSNBDFVUJDBM
EJHJUBM USBOTGPSNBUJPO PGUFO GBDFT DIBMMFOHFT TVDI BT T
JOWFTUNFOU MPX JNQMFNFOUBCJMJUJ PG TPMVUJPOT BOE IJ
BOE FSSPST #Z MFWFSBHJOH PWFS B UIPVTBOE QSPDFTT B
JOGPSNBUJ[BUJPO QSPKFDUT JO UIF JOEVTUSJBM TFDUPS 5*"/4
NVMUJQMF QSPDFTT JOUFHSBUFE TPMVUJPOT UIBU BSF DMP
QSPEVDUJPO TDFOBSJPT TZTUFNBUJDBMMZ SFTPMWJOH UIF DPS
FéâDJFODZ DPNQMJBODF BOE DPTU

1 1SPDFTT 5FDIOPMPHZ -FBEJOH 'VMM 1SPDFTT "VUPNBUJPO
5*"/4 IBT FTUBCMJTIFE B DSPTT EJTDJQMJOBSZ F
QOWP NQUBTJJOH QR E@FT

TDFOBSJPT TVDI BT DIFNJDBM TZOUIFTJT CJPUFDIO
BOE CJPNFEJDBM BQQMJDBUJPOT B DPSF DPOUSPM
EFWFMPQFE 5IJT BMMPXT DVTUPNFST UP JOEFQFOEFOU
BOE NBOBHF QSPEVDUJPO SFDJQFM

5*"/4 .PEFM

PGGFSFE XIJDI FODPNQBTT QFSGPSNBODF PQUJNJ[BUJPO BOE
NBJOUFODF FOBCMJOH DMJFOUT UP BUUBJO TVTUBJOFE F
QSPEVDUJPO FéâDJFODZ

2-JHIU 1SPEVDUJPO .BOBHFNFOU 4ZTUFN
5P DJSDVNWFOU UIF DIBMMFOHFT PG EJJHJUBM USBOTGPSN
IJHI DPTUT BOE QSPUSBDUFE DZDMFT B GMFYJCMF FGGJDJFOU
QSPEVDUJPO NBOBHFNFOU TZTUFN XBT EFWFMPQFE CBTFE PO UIF
PG MJHIU EFTJHO NPEVMBSJUZ BOE FBTF PG EFQMPZNFOU
5IF DPSF QSPEVDU -JHIU .BOVGBDUVSJOH &YFDVUJPO
5.&4 JT DIBSBDUFSJ[FE CZ ESBH BOE ESPQ QSPDFTTFT BOE
QMBZ DPNQMJBODF TJHOJéâDBOUMZ SFEVDJOH UIF BQQMJDBUJPO
%SBH BOE %SPQ 6MUSB 5BFFUTZPFFM JCHDPSQPSBUFT
OFBSMZ QSF CVJMU VOJWFSTBM CVTJOFTT DPNQPOFOUT 1SP
DBO DPOGJHVSF QSPEVDUJPO XPSLGMPXT CZ TJNQMZ E
DPNQPOFOUT BOE UIF TZTUFN BVUPNBUJDBMMZ HFOFSBUFT FMP
5IJT JOOPWBUJPO TIPSUFOT UIF NPEFMJOH BOE EFQMPZNFOU DZDM
UP IPVST

0VU PG UIF #PY \$PNQUBOEBSJ[FE DPNQPOFOUT TVDI BT
FMFDUSPOJD TJHOBUSVFT BOE BVEJU USBJMT SFEVDF WBMJEBUJPO
FOTVSJOH FéâDJFOU BOE DPNQMJBODU JNQMFNFOUBUJPO
"* QPXFSE 1SPEVDUJPO *OU#ZMJQHFOSFU)JCH PQFO

TPVSDF "*" NPEFMT XJUI FOUFSQSJT F LOPXMFEHF CBT
SVMFT BOE FYQFSUJT F UP QSPWJEF JOUFMMJHFOU EFD
BMFSUT BOE QSPDFTT PQUJNJ[BUJPO

5*/4 .PEFM

TVDDFTTGVMZ BQQMJFE JO MFBEJOH EPNFTUJD CJPQIBSNBDFVUJ
TVDI BT #FJ(FOF 2JMV "OUF 1BSNBDFVUJDBM BOE)VBTIFOHZVBO

47BMVF -PPQ GSPN 4UBCMF 1SPEVDUJPO UP *OUFMMJHFOU 0QFS
5IF 5*/4 "VUPNBUJPO BOE *OGPSNBUJ[BUJPO 5FBN JT CE
QSPDFTT FYQFSUJTF BOE DVTUPNFS WBMVF #Z JNQMFNFOUJOH
BVUPNBUJPOó+ JU FTUBCMJTIFT B TUBCMF FGGJDJFOU BOE D
QSPEVDUJPO GPVOEUBUJPO XIJMF UIF ó+MJHIU QSPEVDUJPO NBOBH
DSFBUFT B GMFYJCMF BOE JOUFMMJHFOU EJHJUBM NBOBHFN
5IJT TZOFSHZ DPOTUSVDUT B GVUVSF PSJFOUFE TVTUBJOBKMF
JOOPWBUJWF EJHJUBM QMBUGPSN GPS NBOVGBDUVSJOH FOU
SFMJBCMF BOE BHJMF GPVOEUBUJPO GPS TNBSU GBDUPSJFT

* O UIF FSB PG UIF FYQMPTJWF HSPXUI PG BSUJG
UFDIOPMPHZ 5*"/4 IBT BTUVUFMZ DBQUVSF UIF QV
USBOTGPSNBUJPO #FZPOE TJNQMF EJJHJUBM DPOOFDUJW
UP JOUFMMJHFOU HFOFSBUJPO BOE EFDJTJPO NBLJOH #
JOUP BMM BTQFDUT PG FOHJOFFSJOH EFTJHO QSPDF
CVTJOFTT PQFSBUJPOT 5*"/4 IBT BDIJFWFE B QSPGPVO
ó+"* FOHJOFFSJOHó+ 5IJT JOUFHSBUJPO IBT OPU PC
EFMJWFSZ FéâDJFODZ CVU BMTF BDIJFWFE B QBSBEJHN
ESJWFOó+ UP ó+EBUB ESJWFOó+ EFDJTJPO NBLJOH SFE
TUBOEBSET JO FOHJOFFSJOH TFSWJDFT

1"*(\$ ESJWFO *OUFMMJHFOU %FTJHO 'SPN ö \$PODFQUJPO
5*"/4 UBLFT UIF MFBE JO BEPQUJOH HFOFSBUJWF BS
"*(\$ UFDIOPMPHZ PWFSDPNJOH UIF UFNQPSBM BOE
PG USBEJUJPOBM FOHJOFFSJOH EFTJHO 5IJT JOOPW
BQQFBMJOH BOE EFDJTJPO TVQQPSUJOH EFTJHO TPMVUJF
*OTUBOUBOFPVT 'BDBEF 3FOEFSJOH 1PXFSFE CZ P
JOEVTUSJBM BSDIJUFDUVSF TUZMF NPEFM EFTJHOFST P
QBSBNFUFST BOE TUZMF LFZXPSET BOE UIF "*" DBO H
IJHI RVBMJUJZ GDBEF SFOEFSJOHT JO EJWFSTF TUZMFT

5*/4 .PEFM

JOOPWBUJPO OPU POMZ TIPSUFOT UIF EFTJHO DZDMF CZ PWFS
BMMPXT DMJFOUT UP DPNQBSF WJTVBM TPMVUJPOT GSPN NVMUJQ
EVSJOH UIF FBSMZ TUBHF PG UIF QSPKFDU SFBMJ[JOH UIF WJTJ
UIJOL JT XIBU ZPV TFF6+

4JUF -BZPVU 1MBOOJOH #BTFE PO %SUBMMJHFHFOU %FEVDUJ
VQPO 5*/4 FYQFSJFODF GSPN PWFS QSPKFDUT PVS "*
GPSNVMBUFT NVMUJQMF TJUF MBZPVU QMBOT BDDPSEJOH UP TJUF Q
GMPX MPHJD BOE MPHJTUJDT SFRVJSFNFOU #Z NFBOT PG "* B
TJNVMBUF MBOE VUJMJ[BUJPO MPHJTUJDT DPTUT BOE FOFSHZ F
DMJFOUT JO QSPNQUMZ JEFOUJGZJOH PQUJNB MZPVUT UP PQUJN

21SPDFTT *OUFMMJHFODF #SBJO .BTTJWF %BUB "DDVNVMBUJPO
1SFDJTF %FDJTJPO .BLJOH

6+1SPDFTT DFOUSJDJUZ6+ DPOTUJUUVUFT UIF DPSF DIBSBDUFSJT
"* GVODUJPOT BT B QPUFOU FOHJOF UP BDUJWBUF UIJT DPSF B
EFWFMPQNFOU 5ISPVHI JO EFQUI BOBMZTJT BOE TUSVDUVSF
PG QSPDFTT EBUB GSPN PWFS B UIPVTBOE QSFWJPVT QSPKF
FTUBCMJTIFE BO JOEVTUSZ MFBEJOH 6+1SPDFTT *OUFMMJHFODF #S

1SPDFTT %BUB "DDVNVMBUJPO BOE"/4OPXMFEHF (SBQI
IBT EJHJUJ[FE UIF FYQFSUJTF PG PWFS QSPDFTT UFDIOPMP
BOE FYUFOTJWF FOHJOFFSJOH EBUB JODMVEJOH NBUFSJBM
DPOTVNQUJPO EBUB FRVJQNFOU TFMFDUJPO QBSBNFUFST FU

BTTFUT BOE USBJOFE TQFDJBMJ[FE WFSUJDBM NPEFMT
BT èàOF DIFNJDBM FOHJOFFSJOH TZOUIFUJD CJMPHZ BO
"TTJTU JO %FDJ TJPO .BLJOH "DDFMFSBUJPO %
GFBTJCJMJUZ TUVEZ BOE DPODFQUVBM EFTJHO TUBHFT
UP SBQJEMZ QSFEJDU DSVDJBM QSPDFTT QBSBNFUFST B
PGGFSJOH RVBOUJGJBCMF EBUB TVQQPSU GPS UIF DPNC
UFDIOJDBM SPVUFT 5IJT FOBCMFT DMJFOUT UP NBLF X
BOE JNQSPWFT UIF QSPKFDUó,T JNQMFNFOUBCJMJUZ

3\$VTUPNJ[FE 4PMVUJPOT #BTFE PO *OEVUSZ *OTJHIUT
5*"/4 JOOPWBUJWFMZ JOUFHSBUFT BOE DPOTUSVDUT I

5*/4 .PEFM

#Z TFBNMFTTMZ JOUFHSBUJOH TUBUF PG UIF BSU "*" UFD
5*/46, QSPGPVOE QSPDFTT BDDVNVMBUJPO MJGFDZDMF &1\$
JO EVTUSZ TQFDJGJD JOTJHIUT XF BSF MFBEJOH B OFX FOHJOFF
XIFSF ó+WJSUVBM HVJEFT SFBMJUZ EBUB ESJWFT EFDJTJPO NBLJO

5IF SFRVJSFNFOUT GPS (.1 DPNQMJBODF BOE WBMJEBUJ
BOE JOUFSOBUJPOBM (.1 TUBOEBSET BOE HVJEFMJ
1
GSPN SFMBUFE PSHBOJ[BUJPOT BSF CFDPNJOH JODSFE
TZTUFNBUJD UIJOLJOH BOE MPOH UFSN QSBDUJDF 5

5**/4 .PEFM

PG ó+QPTU FWFOU TVQQMFNFOUBSZ WBMJEBUJPOó+ BOE EFFQMZ JO
XPSL JOUP FWFSZ QIBTF PG QSPKFU DPOTUSVDUJPO "EIFSJOH U
BEWBODFE DPODFQUT TVDI BT *\$) 2 BOE *41& \$ 2 UI
TFSWJDFE BSF UIPSPVHIMZ JODPSQPSBUFE JOUP UIF GPMMPXJOH U
%FTJHO 1IBTF 1SPBDUJWF *OUFSWFOUJPO %FéàOJOH 2VBM
5IF WBMJEBUJPO UFBN QBSUJDJQBUFT GSPN UIF QSPKFU
QBSUJDJQBUJOH JO BOE SFWJFXJOH UIF EFéàOJUJPO BOE FWBMV
2VBMJUJ "UUSJCVUFT \$2" T BOE \$SJUJDBM 1SPDFTT 1BSBNFUFS
CPUI DPNQMJBODF BOE DVTUPNFS OFFET QFSTQFDUJWFT E
JEFOUJGJDBUJPO PG \$SJUJDBM \$POUSPM &MFNFOUT \$\$&T \$%&T
UIBU UIF EFTJHO PVUQVU JT WFSJGJBCMF GSPN UIF CFHJOOJO
GPVOEBUJPO GPS TVCTFRVFOU DPNQMJBODF BOE UIFSFCZ SFEVDJ
MBUF TUBHF DIBOHFT DBVTFE CZ EFTJHO EFGFDUT CZ BQQSPYJNB
(&1 1IBTF 2VBMJUJ 0SJFOUFE 4UBOEBSEJ[FE *NQMFNFOUB
%VSJOH UIF (PPE &OHJOFFSJOH 1SBDUJDF (&1 QIBTF UIF W
UFBN BEPQUT B (.1 PVUDPNF ESJWFO BQQSPBDI CZ FTUBCMJ
RVBMJUJ SFRVJSFNFOU GPS DSJUJDBM DPOUSPM QPJOUT 5I
PSJFOUFE NFUIPEPMPHJFT XF TUBOEBSEJ[F DPOTUSVDUJPO BO
JOTUBMMBUJPO UP FOTVSF UIBU BMM XPSL DPNQMJFT XJUI SFHVI
5IJT NFUIPEPMPHZ BDIJFWFT B SFEVDUJPO PG PWFS IO 0UH•

%FMJWFSZ BOE 6TBHF 1IBTF 1SPGFTTJPOBM 5F
)BOEPWFS

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02 XJUI QSPGFTTJPOBM QSPGJDJFODZ 5IJT FOTVSFT U
FRVJQNFOU BSF USBOTGFSSFE UP DVTUPNFST JO B T
TUBUF XIJMF TVQQPSUJOH TVCTFRVFOU QFSGPSNBODF I
FOTVSF QSPEVDUJPO DPOUJOVJUZ BOE QSPDFTT SFMJBCJ

24ZODISPOPVT 2VBMJæ(DBUJPO GPS &æ*DJFODZ BOE
5IF TUSJDU JNQMFNFOUBUJPO PG ó+TZODISPOPVT I
BT UIF GPVOEBUJPO GPS UIF GVMM MJGFDZDMF DPNQM
5*"/4 WBMJEBUJPO UFBN #Z JOUFHSBUJOH WFSJGJDBUJ
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SFBM UJNF XF TIPSUFO UIF BWFSBHF QSPKFDU DZDMF CZ
TBWJOH DMJFOUTó, UJNF BOE BVEJU DPTUT

"T UIF ó+GJOBM TUBHFó+ PG &1\$ QSPKFDUT USJBM SVO
UIF QSPKFDUó,T EFMJWFSBCMFT BOE UIF DMJFOUó,T SFUV
PO PWFS QSPKFDU JNQMFNFOUBUJPOT BOE NPSF U
SFWJFXT 5*"/4 IBT NBEF EVBM CSFBLUISPVHIT JO N
FYFDVUJPO *U IBT BDDPNQMJTIFE UIJT CZ FTUBCMJTIOH
QMBUGPSN BOE TUBOEBSEJ[JOH QSPDFTT SF FOHJOFFS

ESJWFO CZ TUBOEBSEJ[FE QSPDFEVSFT BOE EBUB GBDJMJUBUJO
 USBOTGPSNBUJPO PG USJBM SVOT GSPN CFJOH ó+SFMJBOU PO FN
 UP ó+HVBSBOUFFJOH TZTUFN QFSGPSNBODFó+ &WFO XIFO GBDFE X
 ó+QSPDFTT CMBDL CPYFTó+ JU BMMPXT GPS UIF PCKFDUJWF
 BTTFTTNFOU PG XIFUIFS UIF UFDIOPMPHZ NFFUT UIF SFRVJSFE TUE
 *O B MBSHF TDBMF BOUJJCJUJD QSPKFDU QSF JOUFSWFOUJF
 SVO WFSJGJDBUJPO QMBUGPSN JEFOUJGJFE BOE SFTPMWFE
 BEWBODF 5IJT SFTVMUFE JO B SFEVDUJPO JO UIF USJBM SV
 FOBCMFE UIF DMJFOU UP BDIJFWF DPNQMJBODF BOE QSPEVDUJ
 EBZT BIFBE PG TDIFEVMF

2-JGFDZDMF 4FSWJDF BOE .VMUJEJNFOTJPOBM &NQPXFSNFO
 5*/4 JOUFHSBUFT JUT UFTU WBMJEBUJPO UFBN BOE TUBOEBSE.
 UISPVHIPVU UIF QSPKFDU MJGFDZDMF FOTVSJOH CPUI ó+POF UJNF
 SVOó+ BOE ó+MPOH UFSN TUBCMF PQFSBUJPOó+
 1SPDFTT 0QUJNJ[BUJPO BOE 'SBSWJBOQB%FTJHO UIF
 FWBMVBUJPO EVSJOH UIF QSPDFTT QBDLBHF SFWJFX BOE)";
 QIBTFT QSFTFOUJOH SFDPNNFOEUBUJPO GPS QSPDFTT TBGFUZ BO
 PQUJNJ[BUJPO CBTFE PO BDUVBM PQFSBPNQOVBMTFEZUB 5ISPVHI UI
 .JMFTUPOF 3FWJFXS4BTMUSNO GFFECBDL JT JODPSQPSBUFE
 NBOEBUPSZ DMPTVSF DSJUFSJPO GPS UIF BOE EFTJHO NPEF
 FMJNJOBUIJOH EFTJHO EFGFDUT BU UIF TPVSDF

" TUBOEBSSEJ[FE DIFDLMJTU TZTUFN J
SFWJFX 1 *%T FRVJQNFOU MBZPVU ESBXJOHT FUD FOT
BMJHOT XJUI UIF BDUVBM PQFSBUJPOBM BOE NBJOUFOB
%PVDNFOU 4JHO PGG "VUTIPSOVUBAZFTU BMBU DSJUJDBM I
NVTU CF DP TJHOFE CZ UIF USJBM SVO WFSJGJDB
0 . SFRVJSFNFOU JOUP DPOTUSVDUJPO ESBXJOHT
NPEJéàDBUJPO

1SPDVSNFOU BOE \$POTUSMFDUUBDOOJDBTM BHSFFNFO
TIBMM DMFBSMZ EFéàOF SFRVJSFNFOU GPS PQFSBUJPOB
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EFTJHO JOUFOU

5SJBM 3VO &YFDVUJPO 15QPS%FMJWFSLZSJBM SVO
5SJBM 3VO 0QFSBUJPO &YQEVENPQSHMBOZ SFTQPOTF Q
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TNPPUI QSPHSFTT

*O B WJUBNJO # QSPKFDU JU BDIJFWFE POF UJN
SVO BDIJFWJOH TUBCMF QSPEVDUJPO XJUIJO POMZ EB
DPNQMFUJPO XIJDI JT TIPSUFS UIBO UIF JOEVTUSZ BW

5*/4 .PEFM

35ISFF TUBHF 4ZTUFNBUJD 7BMJEBUJPO &OTVSFT 3FMJBCMF
5*/4 JNQMFNFOUT UIF QSPHSFTTJWF QSJODJQMF PG 6+USBOTJ
TUBOEBMPOF UP TZTUFN JOUFHSBUJPO BOE GSPN OP MPBE UP PQFS
B UISFF QIBTF WBMJEBUJPO QSPDFTT OBNFMZ TJOHMF NBDI
DPPSEJOBUE USJBM SVO BOE NBUFSJBM MPBE USJBM SVO JU
FRVJQNFOU QFSGPSNBODF TZTUFN TZOFSHZ BOE QSPDFTT
4VQQPSUFE CZ TUBOEBSEJ[FE QSPDFEVSFT BOE FYQFSU
UISPVHIPVU UIF QSPKFDU BUUBJOT JUT DPSF PCKFDUJWF PG 6+PC
USJBM SVO BOE MPOH UFSN TUBCMF PQFSBUJPO6+ EFMJW
EFMJWFSBCMFT UIBU JT QSPEVDUJPO SFBEZ

00F UJNF 4VDDFTTGVM 5SJBM 3

*O FOHJOFFSJOH JOEVTUSZ ó+POF UJNF TVDDFTTGVM U
NFSF QMFEHFT JU SFQSFTFOUT B DPNQSFIFOTJWF BTTF
TZTUFNT PSHBOJ[BUJPOBM DBQBCJMJUJ5T"/4OE EFMJV
XBT UIF GJSTU UP TZTUFNBUJDBMMZ JNQMFNFOU UI
JOEVTUSZ BOE DPOUJOVPVTMZ WBMJEBUFT JU UISPVHI M
B NPEFM DIBSBDUFSJ[FE CZ FOE UP FOE QSPDFTT DPOUS
JOUFHSBUJPO BOE MJGFDZDMF FNQPXFSNFOU XF GVC
DMJFOUTó, VODFSUBJOUJFT SFHBSEJOH QSPEVDUJPO U
PVUDPNFT *O EPJOH TP XF IBWF SFEFéàOFE UIF CFODINB
EFMJWFSZóLQSPQFMMJOH UIF JOEVTUSZ GSPN USBEJUJPO
IBOEPWFSó+ UP SFTVMUT ESJWFO ó+FéâDJFOU QSPEVDUJPO
#Z UIF FOE PG 5*"/4 IBE TVDDFTTGVMZ DPNQ
TVDDFTTGVM USJBM SVO JO PWFS QSPKFDUT TQBO
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BDUJWFMZ SFTIBQJOH UIF FOHJOFFSJOH JOEVTUSZ UP
SFTVMU PSJFOUFE BOE B WBMVF ESJWFO NPEFM PG TVDD

3FGFSFODF 1SPKFDUT

&YDFMMFODF JT OFWFS BO PWFSOJHIU BDIJFWFNFOU CVU JT
DPOUJOVPVT JUFBSUJPO BOE SFGJOFE PWFS UJNF #Z UIF FOE
IBE DPOGSPOUFE DIBMMFOHFT BOE EFMJWFSFE WBMVFT JO PWF
FWPMWJOH GSPN BO JOEVTUSZ QBSUJDJQBOU UP B LFZ DIBMMFOH
B USBJMCMB[FS 5IJT KPVSOFZ WJWJEMZ FNCPEJFT UIF QIJMPTPQI
MFHBDZ JOTQJSJOH JOOPWBUJPO QVSTVJOH QSBDUJDF BOE BTQJ
óLSPPUFE JO IFSJUBHF GPDVTFE PO JOOPWBUJPO EFEJDBUFE UP
ESJWFO CZ BTQJSBUJPOT

8JUIJO UIJT EFWFMPQNFOUBM GSBNFXPSL FBI QSPKFDU FNC
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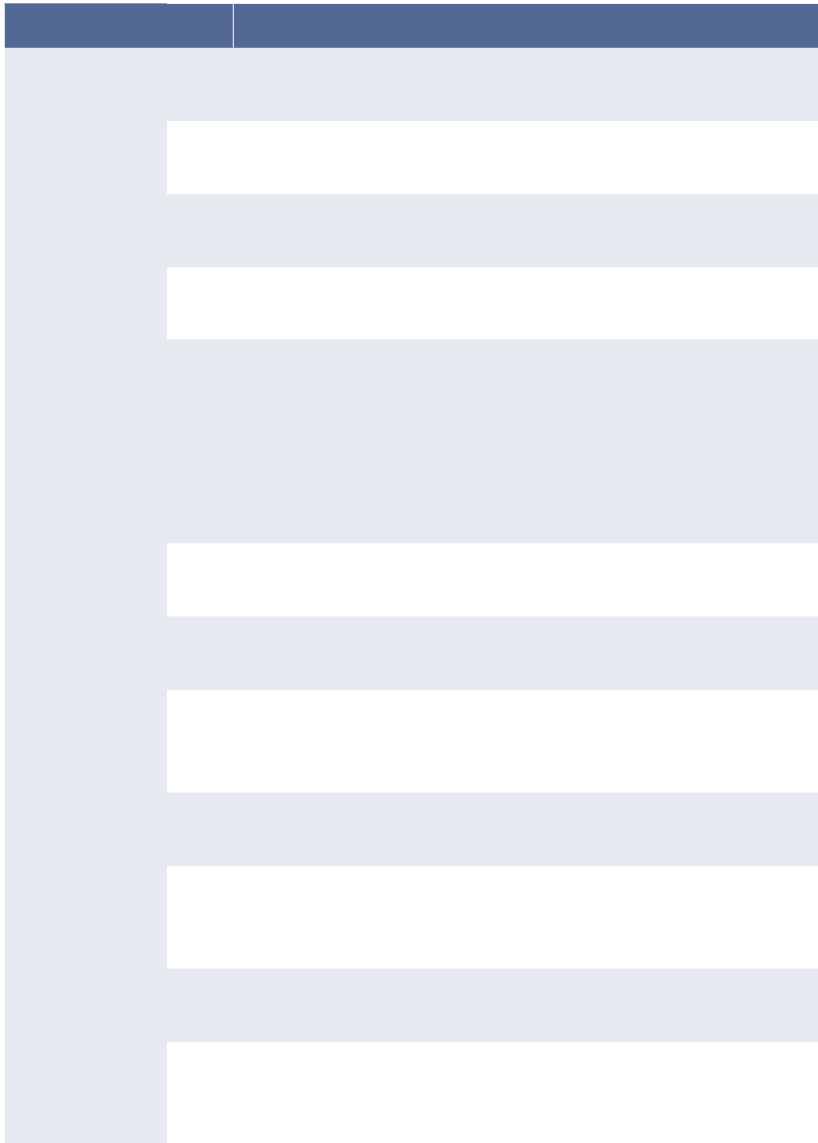
*OEV TUSZP	3FGFSFODF 1SPKFDT 1BS
'JOF \$IFNJDBMT	+JOHEF[IFO 'VTIJOF -JGF 5FDIOPMPHZ \$P -UE 7JOZMFC \$BSCPOBUF 7\$ &MFDUSPMZUF "EEJUJWFT 1SPKFDT
)FOBO 1JOHNFJ 4IFONB &MFDUSPOJD /FX .BUFSJBM \$P -UE 7BOBEJVN -JRVJE 'MPX &OFSHZ 4UPSBHF &RVJQNFOU /FX .FEJVN 1SPKFDT
	4IBOEPOH ,FIBO 4JMJDPD 4PVSDP /FX .BUFSJBM \$P -UE &MFDUSPOJD HSBEF 4JMJDPD \$IFNJDBMT 1SPKFDT
	,JOHCPBSE)FOHZBOH *OEV TUSJBM \$P -UE "OOVBM 1SPEVDUJPO PG 5POT PG \$IMPSJOF \$POUBJOJH &MFDUSPOJD (SBEF 4QFDJBMUZ (BTFT 1SPKFDT
	5JBOKJO %JT5IF"MM 5FDIOPMPHZ \$P -UE UPO &MFDUSPOJD (SBEF &RVJQNFOU QSPKFDT
	4IBOEPOH (JOOP /FX .BUFSJBM 5FDIOPMPHZ \$P -UE &MFDUSPOJD HSBEF 0SHBOJD #PSBUF &TUF 1SPKFDT
	+JOHDIV .FNCSBOF .BUFSJBM :BOHRVBO \$P -UE :BOHRVBO 2VBTJ TPMJE 4UBUF .FNCSBOF 1SPKFDT
	+JBOHYJ %FTJ \$IFNJDBM \$P -UE &MFDUSPOJD \$IFNJDBM 1SPKFDT
4ZOUIFUJD #JPM PHZ	*MJ \$IVBOOJH #JPUFDIOPMPHZ \$P -UE 'FSNFOUBUJPO "DUJWF 1IBSNBDFVUJDBM *OHSFEJFOUT BOE)JHI FOE "DU 1IBSNBDFVUJDBM *OHSFEJFOUT 1SPKFDT
	:JMJ +JBOHOJH #JPUFDIOPMPHZ \$P -UE (SFFO \$JSDVM &DPOP NZ *OEV TUSJBM 1BSL 1SPKFDT
	2JOIVBOHEBP ")# #JPF OHJOFFSJOH \$P -UE 4NBMM "NJOP "DJE 1SPKFDT
	#BJZBOOVS ")# #JPUFDIOPMPHZ \$P -UE 4NBMM "NJOP "DJE 1SPKFDT
	"OIVJ ")# #JPUFDIOPMPHZ \$P -UE " ESJWFO #JPNBOVGBDUVSJOH 3 % BOE 1JMPU %FNPOTUSBUJPO #BTF 1SPKFDT

*OEVUSZP	3FGFSFODF 1SPKFDUT 1BS
4ZOUIFUJD #JPMPHZ	*Oofs .POHPMJB &11&/ #JPUFDIOPMPHZ \$P -U .POPTPEJVN (MVUBNBUF 1SPKFDU
	,FLFEBMB +JOIBJ #JPUFDIOPMPHZ \$P -UE \$PSO %FFQ 1SPDFTTJOH 1SPKFDU
	7FEBO *OUFSOBUJPOBM 7JFUOBN \$P -UE "N 1SPKFDU
	*Oofs .POHPMJB (VBOHEB -JBOGFOH #JPUFDIO -UE /FX \$POTUSVDUJPO PG #JP CBTFE /FX .BUR 1IBSNBDFVUJDBM *OUFSNFEJBUFT 1SPKFDU
	*Oofs .POHPMJB 753 #JPUFDIOPMPHZ \$P -UE FO[ZNF 1SFQBSBUJPO 1SPKFDU
	\$IJGFOH 1IBSNBDFVUJDBM \$P -UE)POHTIBO # 1SPKFDU
	4IBOYJ +JOCJ #JPNFEJDBM \$P -UE *OEVUSJ 1SPKFDU PG 5ZQF ***)VNBO \$PMMBHFO
	1PMZXBZ -JBOZVOHBOH #JPUFDIOPMPHZ \$P - /FX UPUT ZFBS 4USBX CBTFE #JPTZOUIFTJ *OEVUSJBMJ[BUJPO 1SPKFDU
	4IFOHUBJ #JPUFDIOPMPHZ \$P -UE PG 'VGFOH ,B[BLITUBO #JPUFDIOPMPHZ *OEVUSJBM 1BSL
	\$BUIBZ #JPUFDIO,T 'FSNFOUBUJPO \$POUJOVPVT 1SPKFDUT BU JUT +JOYJBOH 8VTV BOE 5BJZVE
	;IBPRJOH 4UBS -BLF #JPUFDIOPMPHZ \$P -UE GVODUJPOBM 'FSNFOUBUJPO 1JMPU 1MBUGPSN
	8VIBO (SBOE)PZP \$P -UE "NJOP "DJE *OEVU \$POTUSVDUJPO 1SPKFDU
	"OHFM :FBTU \$P -UE &O[ZNF 1SFQBSBUJPO 1S
#MPPNBHF #JPUFDIOPMPHZ \$P -UE -JGF)FBM 1BSL 1SPKFDU	

*OEV TUSZP	3FGFSFODF 1SPKFDUT 1BS
4ZOUIFUJD #JPM PHZ	8BOIVB \$IFNJDBM 4JDIVBO \$P -UE 'FSNFOUBUJPO 1SPKFDU
)FJMPOHKJBOH :JIFOH #JPUFDIOPMPHZ \$P -UE "OOVBM 1SPEVDUJPO PG UPO ,FZ 5FDIOPMPHZ /FX &O[ZNF 1SFQBSBUJPO 1SPKFDU
	'PSUVOF 1IBSNBDFVUJDBM 5BJYJOH \$P -UE /FX 1SPEVDUJPO #BTF 1SPKFDU
)FOHUPOH *OOF S .POHPMJB #JPUFDIOPMPHZ \$P -UE 4NBMM 7BSJFUZ "NJOP "DJE *OEV TUSJBM #BTF 1SPKFDU
	/BOKJOH #JPUPHFUIFS #JPUFDIOPMPHZ \$P -UE 3FTFBS BOE *OEV TUSJBMJ[BUJPO 1SPKFDU PO)JHI &àDJFODZ /VDMFPUJEF #JPTZOUIFTJT 5FDIOPMPHZ
	\$IBOHEF &DPOP NJD BOE 5FDIOPMPHJDBM %FWFMPQNFOU ;POF %FWFMPQNFOU BOE \$POTUSVDUJPO #VSFBV 4ZOUIF #JPM PHZ .BOVGBDUVSJOH 1JMPU 5SBOTGPSNBUJPO #BTF 1SPKFDU
)FOBO .VZVBO "OMJBOH 4ZOUIFUJD #JPUFDIOPMPHZ \$P -UE UPOT ZFBS 4ZOUIFUJD #JPM PHJDBM 1SPEVDUT 1SPKFDU
	*OOF S .POHPMJB ;IPOHNV #JPM PHJDBM 1IBSNBDFVUJDBM \$P -UE %FNPOTUSBUJPO 1SPKFDU PG *OOPWBUJPO ESJ *OEV TUSJBM \$IBJO 6QHSBEF PG .BDSPMJEF
	9JOKJBOH :JMJIPOH #JP /FX .BUFSJBM 5FDIOPMPHZ \$P -UE UPOT ZFBS "HSJDVMUVSBM #Z QSPEVDUT %FFC 1SPDFTTJOH BOE \$PNQSFIFOTJWF 6UJMJ[BUJPO 1SPKFDU
	:J :J 9JOH)VB #JPUFDIOPMPHZ \$P -UE *OUFHSBUFE 1SPKFDU PG "DUJWF 1IBSNBDFVUJDBM *OHSFEJFOUT BOE 'PSNVMBUJPOT
	4IFOZBOH #PUBJ #JPQIBSNBDFVUJDBM \$P -UE 4UFSPJE)PSNPOF 1SPKFDU
4IBOEPOH +JOOVP 1IBSNBDFVUJDBM \$P -UE 4ZOUIFUJD #JPM PHZ *OOPWBUJPO #BTF 1SPKFDU	

*OEVUSZP	3FGFSFODF 1SPKFDT 1BS
#JPQIBSNB DFVUJDBM	(VBOH[IPV #FPOF #JPQIBSNBDFVUJDBM \$P -UE "%\$ %4 8PSLTIPQ 1SPKFDT /BOZVBO 1BSL
	#FPOF 4IBOHIBJ 1IBSNBDFVUJDBM 3 % \$P -U 4IBOHIBJ *OOPWBUJPO \$FOUFS 1SPKFDT
	#JPNFEJDBM 5FDIOPMPHZ 5SBOTGFS BOE 5SBOT \$FOUFS (VBOH[IPV \$P -UE 1SPKFDT
	\$IJBUBJ 5JBORJOH 1IBSNBDFVUJDBM (SPVQ \$P FOE \$PNQSFIFOTJWF 1SFQBSBUJPO 8PSLTIPQ 1
	-WZF +JB6,BP 1IBSNBDFVUJDBM 4IJKJ[IVBOH \$P 3FDPNCJOBBOU BOE %SVH 3 % 1SPEVDUJPO #BTF
	'PTVO "OUJHFO \$IFOHEV #JPQIBSNBDFVUJDBM \$P -U *OOPWBUJWF 7BDDJOF)FBERVBSUFST BOE *OEVUSJBI 1SPKFDT
	4IFO[IFO)FQBMJOL 1IBSNBDFVUJDBM (SPVQ \$P /FX 1SFQBSBUJPO -JOF 1SPKFDT BU 1JOHTIBO '
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	4IJIVJEB 1IBSNBDFVUJDBM (SPVQ +JMJO \$P 1SPEVDUJPO 'BDJMJUZ GPS #JPMPHJDT 1SPKFDT
	4V[IPV +VXFJ #JPUFDIOPMPHZ \$P -UE .JMM ZFBS)VNBO 7BDDJOF 1SPKFDT
)BOH[IPV %"\$ #JRMUFDZ CSP -UEH" UV PE
	+@ ODV 7BOHVBSU 1IBSNBDFVUJDBM \$P -UE

5*"/4 .PEFM



*OEV TUSZP	3FGFSFODF 1SPKF DUT 1BS
	4IBOEPOH -VLBOH 1IBSNBDFVUJDBM \$P -UE \$)VNBO 4ZOUIFUJD "DUJWF 1IBSNBDFVUJDBM *OH 5FDIOPMPHZ 6QHSBEF 1SPKF DU
	;IVIBJ 6OJUFE -BCPSBUPSJFT \$P -UE (BPMBO 1SPEVDUJPO #BTF 1SPKF DU
	\$IFOHEV .JDSPDIJQ 1IBSNBDFVUJDBM \$P -UE *OOPWBUJWF %SVH .BOVGBDUVSJOH #BTF 1SPK
)VBOHHBOH)VNBOXFMM 1IBSNBDFVUJDBM \$P *OEV TUSJBMJ[BUJPO 1SPEVDUJPO #BTF 1SPKF D /FX BOE 4QFDJBM "DUJWF 1IBSNBDFVUJDBM *OH
	+JBOHTV 4JOPQFQ "PTBJOVP #JPQIBSNBDFVUJD \$POTUSVDUJPO 1SPKF DU PG 1FQUJEF "DUJWF 1 *OHSFEJFOU 8PSLTIPQ
	'VKJBO (FOIPQF #JPUFDI \$P -UE "1* 1JMPU 1 BOE 1IBSNBDFVUJDBM *OEV TUSJBMJ[BUJPO #BT 1FQUJEF *OEV TUSJBM 1BSL 1SPKF DU
	4JDIVBO %VPSVJ 1IBSNBDFVUJDBM \$P -UE)JH 1FQUJEF #JPQIBSNBDFVUJDBM *OEV TUSZ #BTF
)JTVO 1IBSNBDFVUJDBM)BOH[IPV \$P -UE 'V #BTF 1SPKF DU
	5JBOLF +JOH[IPV 1IBSNBDFVUJDBM \$P -UE () 1IBSNBDFVUJDBM *OEV TUSZ #BTF 1SPKF DU
	1IBSNBSPO 4IBPYJOH 1IBSNBDFVUJDBM \$P -U "DUJWF 1IBSNBDFVUJDBM *OHSFEJFOU 1SPKF DU
	#FUUB 1IBSNBDFVUJDBM 4IFOH[IPV \$P -UE * %SVH *OEV TUSJBMJ[BUJPO #BTF 1SPKF DU
)VBEOH .FEJDJOF 9J6,BO #PEZHV BSE 1IBSNBD \$P -UE \$POTUSVDUJPO 1SPKF DU PG /FX #BTF 1IBSNBDFVUJDBM *OHSFEJFOUT BU UIF 1IBSNBD %JWJTJPO

\$IFNJDBM
1IBSNBDFVUJDBM

5 * " / 4 . P E F M



*OEV TUSZP	3FGFSFODF 1SPKFDUT 1BS
'PPE)FBMUI	5JBOKJO .PEFSO *OOPWBUJPO 5SBEJUJPOBM \$IJOFT 4DJFODF BOE 5FDIOPMPHZ \$P -UE *OOPWBUJPO \$P GPS .PEFSO 5SBEJUJPOBM \$IJOFTF .FEJDOJOF .BOVGR
	&UTPOH 2JOHEBP *OEV TUSJBM \$P -UE 'MBW 'SBHSBODF 1SPEVDUJPO -JOF 1SPKFDU
	'PTIBO .BJ %JBO 'PPE \$P -UE 5VSOLFZ 1SPKF 'MBWPSJOH BOE 4FBTPOJOH 1SPDFTT
)VCFJ)PODI 1BSNBDFVUJDBM \$P -UE "OUJ UVNPS 1SFQBSBUJPO BOE 1MBOU &YUSBDUJPO 1SPDFTTJOH
	(VBOHYJ 8F)BOE 1BSNBDFVUJDBM \$P -UE \$PO 1SPKFDU GPS *OUFMMJHFOU 5SBEJUJPOBM \$IJC 1SPEVDUJPO -JOF
	#BPEJOH 8BZDIFJO 'PPE 5FDIOPMPHZ \$P -UE *NQSPWFNFOU 1SPKFDU GPS 4FBTPOJOH .BUFS.
	:JDIBOH)VBNBOXFMM 1BSNBDFVUJDBM \$P -UE OSBM /P 5IJSE 8PSLTIPQ 4ZSVQ *OHSFEJFOU 4ZTU
	8FJMPOH %FMJDJPVT (MPCBM)PMEJOHT \$P -U 0JM 5VSOLFZ 1SPKFDU
	4JDIVBO \$POXFF 'PPE \$P -UE #BTF 0JM BOE 8B 3FDPWFSZ BOE 5SFBUNFOU 4ZTUFN 1SPKFDU
	9JBNFO 5PCBDDP *OEV TUSJBM \$P -UE 1VSDIBTF P &RVJQNFOU BOE 4VQQPSUJOH *NQMFNFOUBUJPO 1S

5 * " / 4 . P E F M

#Z QPTJOH DSJUJDBM RVFTUJPOT UP VODPWFS JOO
FTUBCMJTIJOH TUSVDUVSFE QBUIXBZT UP FOBCMF U
UIF 5*"/4 .PEFM XJMM DPOUJOVF UP FNCPEZ UIJT BEWE
JOEVTUSJBM FWPMVUJPO *U ESJWFT UFDIOPMPHJDBM

